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A Clinical Lecture
ON
GANGRENE OF THE LUNG.

Delivered at the Hospital for Consumption and Diseases of the Chest, Brompton, on Feb. 11th, 1914,

BY H. BATTY SHAW, M.D. LOND., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL AND TO UNIVERSITY COLLEGE HOSPITAL.

GENTLEMEN,—You will probably have asked yourselves what is the reason which has prompted me to give a lecture on such a comparative rarity as gangrene of the lung—on a disease which Eichhorst has found to occur in only 34 out of 27,472 cases coming under his clinical observation—i.e., in less than 0·1 per cent. Hensel, speaking from post-mortem experience, found it in only 83 cases out of a total of 5072 examinations—i.e., about 1·6 per cent. The answer is that until I came to study cases in the wards of this hospital I had included all cases of pulmonary disease associated with offensive expectoration under the heading of probable cases of bronchiectasis. It was not long before I had a sharp lesson as to how far post-mortem opinion may differ from a clinical one. Lastly, gangrene of the lung is a very serious malady; for, according to Lenhartz, 80 per cent. of the cases treated by medical measures die, and according to Eichhorst a smaller, but still large percentage die—viz., 53 per cent.

The sharp lesson to which I have referred came to me shortly after taking charge of beds in this hospital.

A married woman, aged 24, was admitted with a history of left-sided pleurisy eight months previously, followed by cough and hæmoptysis two months later. The cough was increased by stooping and was accompanied by night sweats; the expectoration was yellow, and occasionally very offensive throughout the six months prior to her admission. Rhonchi were heard over both sides of the chest, fine crepitations at the right apex in front, and a few friction sounds to the right of the pericardium. Six weeks after admission dulness was found at the left base, and in the same situation were some friction sounds. There were no signs of excavation anywhere, nor were tubercle bacilli discoverable in the expectoration. As the phlegm was very copious and very offensive and the fingers clubbed, and as the history of lung mischief extended over a period of nine and a half months and the expectoration of offensive sputum over seven and a half months, it seemed to me that in accordance with my out-patient practice (uncontrolled by post-mortem observation) I might reasonably believe that she was suffering from bronchiectasis, and that the cavities formed by the dilated bronchioles did not reveal themselves because they were charged with expectoration—an occurrence well known to take place in true cases of bronchiectasis. She was accordingly treated, amongst other methods, by elevating the foot of the bed so that the head was depressed, with the idea of assisting the bronchiectatic cavities to empty more easily. The result, whether *post or propter*, was most disastrous, for in a few days the temperature became much elevated, there was severe toxæmia, and very acute bronchitis was added to her former disabilities. These unfavourable phenomena increased and the patient died. At the post-mortem examination a patch of gangrene as big as half a hen's egg was found at the apex of the right lung, and the left lung was consolidated in its upper lobe and showed numerous small foci of suppuration and small abscesses and bronchitis in the lower lobe; there was also patchy pneumonia of the right lung. There was no trace of bronchiectasis.

Such an experience gives much food for reflection: first of all, because it is quite possible that the treatment hastened, if it did not actually cause death; and secondly, because it looks as if gangrene existed in this case for at least seven and a half months. Another case, happily alive and apparently recovered, thanks to Mr. Stanley Boyd's operation, had gangrene for over a year.

DEFINITION.

To define what is meant by gangrene of the lung, or as it is sometimes called gangrenous pneumonia, is not a simple affair. Gangrene is another name for necrosis or sphacelation, but just as gangrene of the leg may be accompanied by no odour whatever, so gangrene of the lung may exist and yet the expectoration, if present, may be quite free from offensive odour; at a post-mortem examination gangrene may be found affecting the centre of a pneumonic lung. Gangrene of the lung has been met with post mortem, and yet during life the patient not only had no offensive expectoration, but no expectoration at all. At the bedside we must think of gangrene of the lung when we observe, in a case revealing or not physical signs of disease in the lungs, that there is a *sudden* development of horribly offensive expectoration, more offensive than that of bronchiectasis or of abscess of the lung. At post-mortem examinations gangrene may be met with, associated *or not* with offensive odour, but at the bedside we may essay to diagnose but *one* form of gangrene, and that is the offensive one; hence the reason why the qualification "offensive" is omitted, and a clinical diagnosis of gangrene of the lung implies a condition of the lung associated with the expectoration of very offensive sputum.

CAUSATION.

In order to give more sharply the etiology of gangrene of the lung 16 specimens are brought before you from the museums of this hospital and of University College Hospital.

1. The first specimen shows the left lung of a woman, aged 42, who on admission had had chest signs for a year before death and hæmoptysis for the two months prior to death, the last attack proving fatal. The specimen shows no gangrene, but serves to remind us that fatal hæmoptysis may occur in *hydatid of the lung*, and me more particularly of the danger run by a medical friend who for two and a half years has been suffering from signs of lung disease, including hæmoptysis, from infection from this parasite in his lung. The occurrence of offensive expectoration at last forced one to recommend operation, with results which are so far highly satisfactory, and indicate that the gangrenous pneumonia which had probably been set up by his hydatid disease is cured. He had shortly before operation expectorated a large amount of pus (offensive) and hydatid membrane, which has ceased to be expectorated since the operation.

2. The second specimen is the left lung of a patient, aged 63, under the care of the late Dr. Cecil Biss. Gangrene will be seen to exist in the upper lobe, and is represented by an irregular "fluffy" substance stained black by inhaled carbonaceous

material, which also serves to remind us that the expectoration of cases of gangrenous pneumonia is often found to contain, besides elastic tissue, shreds of ill-defined tissue in which is entrapped carbonaceous material, proving further that there is loosening of actual lung tissue. The cause of this gangrene of the lung is found in the presence of a *fistula connecting the left bronchus with a tuberculous interbronchial lymphatic gland.*

3. The third specimen was placed in University College Hospital museum by Mr. Bilton Pollard. This patient had been *crushed in the chest between the buffers of two railway trucks.* He was admitted with extensive surgical emphysema and hæmothorax. Later an empyema developed, and ultimately Estlander's operation had to be carried out for its cure. The specimen, which represents a gangrenous portion of lung, escaped from the wound.

4. The fourth specimen represents the right lung of a young woman who had been successfully treated for eclampsia by Dr. George Blacker, and was subsequently transferred to the care of the late Dr. G. V. Poore for signs and symptoms pointing to what is seen in the specimen—gangrene at the apex of the right lower lobe. Death occurred three weeks after the onset of the symptoms of gangrene.

5. The next specimen shows *cylindrical and saccular bronchiectasis* occurring in the lung of a boy, aged 13, under the care of Dr. Robert Maguire. This patient had suffered from cough and offensive expectoration for nine months before death. Gangrene is seen affecting the anterior half of the right lung, and is probably closely associated as an effect with the bronchiectasis.

6. The sixth specimen represents the right lung of a youth, aged 16 years, formerly under the care of Dr. T. D. Acland. It shows cylindrical bronchiectasis at the base and at the apex *pneumonia* which had become gangrenous. Pneumonia is a very common immediate antecedent of gangrene of the lung.

7. This specimen was obtained from a second case under the care of the late Dr. Biss, a girl, aged 18 years, who suffered from *pulmonary tuberculosis.* There is no record in her case history as to whether she ever had offensive expectoration, but the gangrene is well shown in the specimen as well as thrombosis in that part of the pulmonary artery supplying the gangrenous area. It is alleged by some authorities that the pulmonary artery supplying all gangrenous areas is always thrombosed as in this case, but this must not be taken to mean that all gangrene *results* from thrombosis of this artery, because other cases are undoubtedly caused by processes operating through the bronchi and even through the lymphatics.

8. This specimen taken from a patient, a man, aged 41, formerly under the care of the late Dr. Poore, is shown as an example of the extensive excavation which may take place as the result of gangrenous pneumonia. His illness began as *bronchitis* eight weeks before death; hæmoptysis and offensive expectoration developed six weeks before death. Elastic tissue and other lung tissue were found in the expectoration.

9. The ninth specimen represents the left lung of a patient who died under the care of Sir J. Rose Bradford. There is seen a large ragged cavity, and also the actual sphacelus or necrotic area of lung is seen *in situ.* The specimen is shown not to illustrate a cause, which presumably was *pneumonia,* but to show the extensive excavation which may occur in gangrene.

10. This specimen shows gangrene in the right lower lobe of a patient aged 50, under my own care at University College Hospital. It serves to show that an empyema which is present in this case in connexion with the upper lobe may complicate a case of gangrene of the lung, and affords an explanation of the fact that some cases of empyema take a long time to heal, possibly due to the presence of gangrenous lung connected with them. The patient was admitted for paraplegia caused by spinal caries of the upper dorsal vertebræ, and the lung condition which caused his death developed 14 days previously and is presumably dependent upon pneumonia. The expectoration was offensive and blood-stained.

11. The eleventh specimen is also from a case formerly under my care at University College Hospital. The patient was a young man. It is the left lung and shows the association of gangrene (three well-marked cavities), abscesses of the lung, and an empyema, the latter having developed owing to the rupture of one of the gangrenous cavities into the pleural cavity. It is impossible to say which occurred first, the abscesses or the gangrenous pneumonia. But the specimen serves to remind us of gangrene occurring as part of the change when *pneumonia* affects a lung.

12. This specimen represents the left lung of a case under the care of Mr. A. E. Barker suffering from cancer of the œsophagus. Sloughs are seen *in situ,* and it is apparent that the gangrene had occurred in patches of *broncho-pneumonia* provoked by the *carcinoma of the œsophagus,* which has invaded the air passages as well.

13. This specimen shows the condition of the lung of the patient who died under my care, and to whom reference has already been made. I can only think that my postural treatment of this patient had: (1) either converted a case of *putrid bronchitis and pneumonia* into one of gangrene and abscesses as well; or (2) that a case of gangrene and abscess of the lung had been converted into one of putrid bronchitis with pneumonia.

14. This is a specimen of an enormously enlarged interbronchial gland taken from the last case. This gland is very soft and apparently is a measure of the severe infective processes which had assailed the lung and caused the death of the patient.

15. The next specimen is one of great interest. It represents the right lung of a boy aged 12 who was under my care in this hospital. He had suffered from cough and horribly offensive expectoration and hæmoptysis. There were well-marked signs of consolidation and occasionally of a cavity at the right apex during life. Repeated examinations for tubercle bacilli were made, but always with negative results. As the specimen shows, there is a large cavity at the right apex which was found to contain highly offensive material; consolidation has also taken place in the neighbourhood, and small foci of suppuration are seen. Tubercle bacilli could not be demonstrated in the tissues, but sections of the lung and of the glands receiving lymphatic vessels from the lung showed "giant" cells. This is an example either of *acute pneumonic tuberculosis* giving rise to gangrene, or of gangrene occurring in *pneumonia,* which had afflicted a subject who had the marks (giant cells) of former tuberculosis without the presence of tubercle bacilli either in the sputum during life or in the tissues microscopically examined after death.

16. This specimen is shown because it is an example of the gangrene which occurs in the centre of areas of croupous pneumonia without the occurrence of offensive sputum. The patient was an adult under my care at University College Hospital and died from ordinary *acute croupous pneumonia*; his sputum was not offensive. It will be seen that the gangrenous part of the pneumonic is separated from the non-gangrenous part by a dividing line which is so sharp that it suggests that it had been cut with a sharp instrument.

17. The last specimen is one of very considerable interest, and is taken from a patient formerly under the care of Dr. F. J. Wethered. Like a specimen already shown (No. 3) it shows gangrene resulting from a *direct blow on the chest*. The patient had been struck by a stove weighing 4 cwt., which had slid from a hand-barrow whilst he was drawing it. Pneumonia and abscess cavities are also visible in the specimen, corresponding in position with the part of the chest struck by the stove. The injury occurred four months before death and offensive expectoration occurred at least six weeks before death. No doubt this was an example of *Litten's traumatic pneumonia* which was followed by gangrene.

The above list is sufficient to show what varied causes give rise to gangrene, but there are others. *Infarction of the lung* may be followed by gangrenous changes in the infarcted area, and possibly this was the cause of the gangrene in the above case of eclampsia. If the embolus giving rise to the infarction is infected with putrefactive organisms then gangrene will occur at once in the infarcted area of the lung; such is the sequence of events in gangrene of the lung following gangrene of the leg or following endocarditis in puerperal cases. Gangrene of the lung occurs in cases of *aspiration of food* or *other foreign bodies*, and then forms a feature of aspiration or deglutition pneumonia; and gangrene has closed the scenes in cases of *bulbar paralysis*, in cases of *carcinoma or suppuration* about the upper air passages. *Aspiration* following *vomiting* after the use of a general anæsthetic has also caused gangrene of the lung. Gangrene is a not unusual occurrence in the *insane* and is associated with the *difficulties of feeding* these cases. Gangrene of the lung occurs in *diabetes mellitus*, and in this case the expectoration may be free from offensive odour. It is also met with in *diphtheria*, as in a case of a child under my care at University College Hospital. After 12 months, during which she brought up constantly offensive expectoration, she recovered spontaneously, and will be shown to you to-day. Gangrene of the lung occurs in *typhus* and *typhoid fever*, and is a well-known accompaniment of *aneurysm* or of *growth* or *strictures* interfering with the patency of the bronchus.

Lymphogenous gangrene of the lung has been noted in cases of *carcinoma of the œsophagus*, occurring independently of direct extension into the lung of the original growth. *Subphrenic and hepatic abscesses* may also cause gangrenous pneumonia, and *operations on the stomach and duodenum* may also be followed by it. *Alcoholism* and *renal disease* are important as strongly predisposing the individual to gangrenous pneumonia.

FLORA.

Apparently gangrene is never primary, but always follows in the wake of some other infection of the lung, such as infection by the streptococcus, pneumococcus, staphylococcus, the streptotricheæ, sarcinæ, aspergillus, and by the tubercle bacillus and bacillus coli communis.

The actual gangrene is due to the arrival on the scene of putrefactive organisms such as the proteus, bacillus fluorescens putridus, and leptothrix. In some cases a pseudo-tubercle bacillus has been demonstrated in the lesion. Presumably these putrefactive organisms are derived from the mouth and upper respiratory passages. Groups of cases of gangrenous pneumonia have been described which raise the question of epidemic infection by means of putrefactive organisms. It is a remarkable fact that gangrene should occur so rarely in pulmonary tuberculosis.

SYMPTOMATOLOGY.

Gangrene of the lung may be suspected when, in the course of some one or other of the maladies above referred to, there is a sudden onset of expectoration of very offensive phlegm, associated with symptoms of severe toxæmia, as shown by rise of temperature, rapid pulse, anæmia developing rapidly, anorexia, rigors, and wasting. The course of the malady may be very brief (ending in death or recovery), or the symptoms may go on for many months and still not necessarily be fatal, as cases may recover after many weeks of illness. Not only may the symptoms cease, but the lesion in the lung may entirely disappear.

Hæmopytsis may be a very marked, persistent, and even fatal complication. The expectoration calls for special consideration. It may be very copious, and if collected and allowed to settle shows an upper frothy layer, a middle greenish or brownish-black layer, and a brown moist layer of granular débris. Microscopically carbon, fatty crystals, blood and pus cells, fragments of lung tissue, and countless bacteria may be discovered.

A feature of great diagnostic importance is the presence in the sputum of elastic tissue, which shows that the lung parenchyma has been attacked and actual sphacelation has occurred. Shreds of lung tissue may be found containing numerous particles of inhaled carbon. The presence of the elastic tissue serves to differentiate the case from one of bronchiectasis, though it would not distinguish from abscess of the lung. In the latter case pus would form a large part of the expectoration, whereas in gangrene it is small in amount. The offensive odour is immediately due to sulphuretted hydrogen, to ammonia, amines, skatol, and indol. The absence of elastic tissue has been observed in well-marked cases of gangrene of the lung, and the explanation has been offered that certain putrefactive organisms are capable of exerting tryptic digestion of elastic fibres. Clubbing of the digits is frequently met with, and is remarkable for the rapidity of development.

Complications.—As in the case of bronchiectasis, so in gangrene of the lungs intracranial abscesses may form. Empyema is a common complication, and even pneumothorax may ensue as a fatal complication. Fatal hæmoptysis is not unknown. Metastatic abscesses have been met with in the liver, spleen, and kidneys.

If the gangrene is recovered from no signs may be detectable in the lungs; at other times excavation may persist or the lung become fibrosed and contracted, as in the case shown to-day of the child who has spontaneously recovered from gangrenous symptoms. Albuminuria and albumosuria may occur during the course of the malady.

PROGNOSIS.

This is unfortunately grave, as from 53 to 80 per cent. of the cases treated by medical measures die. This high mortality is due not only to the gangrene of the lung itself, but also to the fact that gangrene is so often secondary to other grave and irremediable causes.

DIAGNOSIS.

There are no special signs in the chest peculiar to gangrene of the lung. A case of gangrene of the lung may be readily diagnosed from bronchiectasis if under observation throughout the illness which precedes the gangrene, for the sudden onset of the signs and symptoms of gangrene is so different from the more insidious onset in the case of bronchiectasis. Gangrene may last for many months, but bronchiectasis for many years. Clubbing of the digits may develop in gangrene, but the most marked cases of clubbing of the digits are seen in bronchiectasis. The presence of elastic tissue is in favour of gangrene, though its absence does not exclude gangrene. In both bronchiectasis and abscess of the lung there is freer discharge of pus, and in many cases there is a distinct sign of cavity formation. Offensive empyemata may burst into the lung and cause difficulty in diagnosing gangrene, and then an exploratory puncture may be necessary. Radiographic examination of the chest may be of the greatest help in locating the site of the gangrene, but as a means of distinguishing gangrene from conditions simulating it little can be expected. The toxæmia met with in gangrene is much greater than in abscess or bronchiectasis, and, as already noted, it is of much more sudden onset than in bronchiectasis. "Foetor ab ore" as met with in uræmia and pyorrhœa alveolaris may in a case presenting lung signs simulate gangrene of the lung, but an examination of the sputum should be of help in such cases.

TREATMENT.

This constitutes one of the most vexed problems which physicians and surgeons must share with one another. A certain number of cases recover by themselves, but the number is not so great as the recoveries following operation. We have seen that Lenhartz found that of cases not treated by operation only 20 per cent. recover; Eichhorst believes that of such cases 47 per cent. recover. Garré found that of the operated cases 66 per cent. recover, and Lenhartz 64 per cent. From a consideration of these figures operations should be carried out promptly as soon as the case is diagnosed as one of gangrene of the lung and is found suitable for operation. It is interesting to know that adhesion of the parietal to the visceral pleura is found in about 92 per cent. of all cases.

There are, however, some "ifs" which must be attended to and which constitute the real difficulty. As we have seen, primary gangrene of the lung is practically unknown. Careful clinical research and observation are needed to discover the nature of the cause at work which has led to the gangrene. In those cases in which the primary cause is a disease from which recovery may be anticipated—e.g., typhoid fever—there should be little delay in considering the wisdom of operation. But where there is some primary cause which will soon be fatal there would be no point in operating. In view of the fact that some cases do recover spontaneously some delay in operation even in favourable cases is advisable; the question is, how long a delay should be recommended? It is useless to try to find a limit from the study of cases of recovery. It is much more reasonable to be guided in each case by the behaviour of the signs and symptoms. If the patient is rapidly losing ground delay in operation should be discountenanced, unless indeed when operation is considered inadvisable by the surgeon on account of the severe symptoms. On the other hand, if the symptoms are not increasing, time should elapse before an operation is decided on.

A point of considerable interest which I have observed is this, that though successful pneumotomy is a difficult proceeding in some cases, owing to the difficulties in finding the site of the gangrene, yet considerable relief is given to the patient by the drainage of the adjacent lung by the pneumotomy wound, even if the gangrenous area is not reached. Further, it is preferable for the offensive discharge to escape through a wound in the chest than to be expectorated.

The medical measures for the cure of gangrene are small in the extreme. All that can be hoped for is to treat the patient symptomatically and to endeavour to lessen the offensiveness of the expectoration and breath by the use of creasote and other allied remedies both by internal administration, by the mouth, by inhalation, or by intrabronchial application. Rest in bed is to be recommended because it is easier then to bring up the foul expectoration from the seat of the malady. Hæmoptysis may be checked by the use of calcium salts or by the inhalation of turpentine. Operation is most likely to be successful in cases of gangrene due to pneumonia or embolism—generally speaking, in cases in which the gangrene is localised. The unfavourable cases are those in which the gangrene is widely diffused, cases dependent upon bronchiectasis, or cases following the aspiration of food.

CENTRAL MIDWIVES BOARD.—Special meetings of the Central Midwives Board were held at Caxton House, Westminster, on March 30th and 31st, Sir Francis H. Champneys being in the chair. A number of midwives were struck off the roll, the following charges, amongst others, having been brought forward: Neglecting to take the temperature of the patient, as required by Rule E. 13; employing an uncertified person as a substitute, in contravention of Section 1 (4) of the Midwives Act, 1902; neglect to wash the patient on the termination of labour, as required by Rule E. 7 (b); not adopting the antiseptic precautions required by Rules E. 3 and 7; not keeping a register of cases, as required by Rule E. 23. A child suffering from inflammation of and discharge from the eyes on and after the third day the midwife did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E. 20 (5); falsely recording in the register fictitious entries of the temperature of the patients; not possessing the whole of the appliances or antiseptics prescribed by the rules; neglect to send notification to the local supervising authority of the occasions upon which medical aid is sought for patients; tying the cord negligently and carelessly so as to endanger the life of the child; not wearing a skirt of washable material when attending patients, as required by Rule E. 1; having been in contact with a person suffering from puerperal fever attending as a midwife at confinements without having undergone disinfection of self or clothing to the satisfaction of the local supervising authority, as required by Rule E. 5; and not being scrupulously clean, as required by Rule E. 1.

The Arris and Gale Lectures

ON

THE MORPHOLOGY OF THE EXTERNAL GENITALIA OF THE MAMMALS.

Delivered at the Royal College of Surgeons of England on March 4th and 6th, 1914,

BY FREDERIC WOOD JONES, D.Sc. LOND.,
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LECTURE II.[1]

Delivered on March 6th.

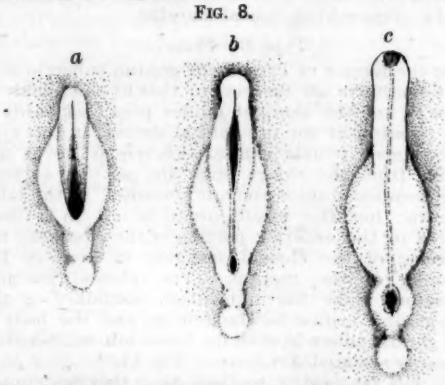
MR. PRESIDENT, LADIES, AND GENTLEMEN.—I will first deal with the developmental phases of the type which, since it will be better to treat it detached from specific examples, I will designate as Type A. In this type the dominant factor in the evolution of the adult condition is the extroversion of the cloaca.

DEVELOPMENTAL PHASES.

Type A: Male.

In the male of Type A the intracloacal genital tubercle is well developed and possesses all the characteristics described in the chelonian penis. The terminal part, which is ultimately to become the glans penis, is not invaded by the seminal groove, although upon the remainder of the penis this groove is well marked as far back as its termination behind the cloacal orifice of the uro-genital sinus. Upon either side of the seminal groove the seminal guides (now called the inner genital folds) are well developed, and they run from the anterior extremity of the seminal groove at the base of the glans to the cloacal orifice of the uro-genital sinus, and past it to the anus, so that, as in the chelonian, they merit the anatomical name of plicæ recto-urethrales. Around the opening of the cloaca run the pouting cloacal lips. (Fig. 8.)

FIG. 8.



The stages in the development of the male of Type A. In (*a*) the cloacal lips (outer genital folds) surround the partly intracloacal genital tubercle which presents a well-marked seminal groove and well-developed seminal guides (inner genital folds). In (*b*) the genital tubercle is extroverted and the seminal guides are fusing. In (*c*) the seminal guides have fused and formed the raphé and the cloaca is obliterated. (Figured from developmental phases in *Homo*.)

The next phase in development is the elongation of the genital tubercle and its complete eversion from the cloaca, accompanied by a general shallowing of the cloacal cavity by the sinking of its roof towards the surface of the body. By a continuation of this process the cloaca, as a cavity, becomes practically obliterated, and the visceral orifices that originally opened into it come to be situated on the general surface of the body. With complete eversion of the cloaca the genital tubercle (penis) becomes fully exposed upon the "perineum," and the seminal guides (inner genital folds) begin to close together and meet in the midline, thus converting the seminal groove into a tunnel (penile urethra) by the formation of the median raphé.

Since the seminal guides meet and fuse in the whole of their length, the median raphé extends from the base of the glans penis along the whole length of the penis and into the margin of the anus. This is an important point to note. It is also obvious that with the closing of the seminal groove a channel is formed from the uro-genital sinus to the base of the glans penis, but at this point the channel ceases. It is now that the terminal epithelial ingrowth invades the glans and establishes the continuity of the seminal tunnel (penile urethra) and the terminal orifice in the glans at the fossa navicularis. This epithelial ingrowth is also concerned in delimiting that hood which, present as a fold in the chelonian, becomes the prepuce in the males of this type. This process of preputial formation has been described by Berry Hart and by myself in previous papers.

Meanwhile, with the eversion of the cloaca the prominent cloacal lips have been displaced laterally. These lips pass immediately in front of the free portion of the penis as it becomes everted from the cloaca, and then, skirting along the sides of the cloaca, pass backwards around the anus to meet behind it towards the base of the tail. The cloacal lips, or the special part of them that lies immediately lateral to the sides of the genital tubercle, become prominent and form two swellings upon the perineal surface. These swellings fade away and meet in front of the penis, they swell out and become conspicuous laterally at its base, and they diminish behind at the sides of the anus, becoming lost in the anococcygeal region. It appears to me that these cloacal lips constitute the basis of the swellings that are generally known as the labio-scrotal or outer genital folds.

Type A: Female.

In the female of Type A the intracloacal genital tubercle is small and resembles the female organ of the chelonian. The terminal glans area is differentiated as in the male; but the seminal groove is shallow and not well marked. The seminal guides when compared with the same structures in the male are trivial, and, as in the female chelonian, they do not extend back beyond the orifice of the uro-genital sinus. These reduced seminal guides (inner genital folds) become in the female the labia minora, and it is essential to regard these at the outset as being far from female perquisites, but rather as reduced and almost functionless remnants of functional male structures. (Fig. 9.)

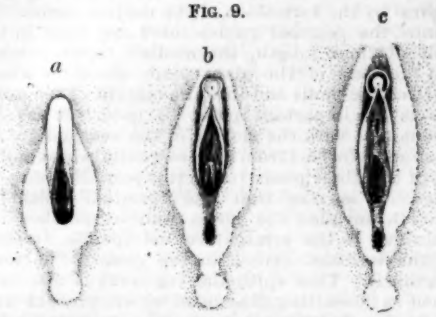
With the eversion of the cloaca in the female the reduced genital tubercle is unfolded upon the perineal surface as the clitoris; the practically functionless seminal guides do not unite over the reduced geminal groove, but stand aside as the labia minora; the prepuce progresses but little further than the stage seen in the female *Testudo;* and the terminal ingrowth for the seminal (urethral) tunnel in the glans, though it may start to develop, does not typically produce a patent channel through the glans. The cloacal lips encircle

[1] Lecture I. was published in THE LANCET of April 11th, p. 1017.

the whole perineal area as in the male. They meet in front of the clitoris (anterior commissure), they skirt the sides of the genital tubercle (labia majora), and fade away in the anococcygeal region.

It is important to repeat here and to bear in mind the somewhat changed point of view from which this account regards the morphology of the labia minora in the female. These structures in the female tortoise are obviously the somewhat

FIG. 9.



The stages in the development of the female of Type A. In (*a*) the condition is practically identical with that seen in the male. In (*b*) the cloaca is becoming more shallow and the genital tubercle shows the widely separated seminal guides (labia minora). In (*c*) the parts have practically assumed their adult condition. (Figured from developmental phases in *Homo*.)

degenerated representatives of the functional seminal guides of the male. In mammalian females of Type A it is equally apparent that they are in a further reduced and functionless condition, and that they never rival in their extent the similar but functional parts of the male. They do not extend back to the hind gut opening in the female chelonian, and in the mammalian embryo they fall still further short of this point. This is an important fact to realise, and it is one that will have to be reverted to in the descriptions of individual species.

One other point needs explanation and emphasis. If all the changes in the development of Type A are initiated and accompanied by an extroversion of the cloaca, it would seem obvious that the area which we term perineum is, in this type, merely the flattened-out roof of the cloaca; this condition contrasts strongly with that displayed in Mammalia of Type B.

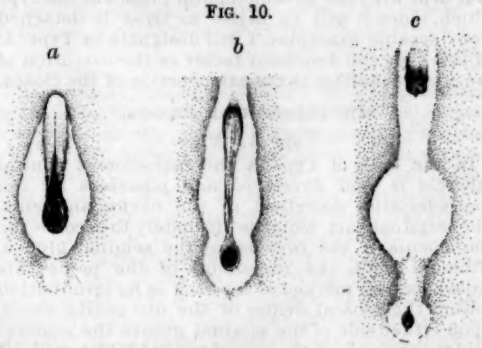
Type B: Male.

The other type which I have come to recognise as being distinct, both by embryonic development and by adult characteristics, I will, in uniformity, designate as Type B. In this type the dominant factor in the evolution of the adult form is the closing over of the cloaca by the cloacal lips—a condition that is altogether different from that described as being characteristic for mammals of Type A.

In the male of Type B the genital tubercle at an early stage possesses all the features described in the chelonian condition, and differs in no essential way from that described in Type A. There is no need to recapitulate these characters, and it is only necessary to follow the stages seen in the embryo in various phases of development. (Fig. 10.)

When the genital tubercle elongates and protrudes from the ventral aspect of the cloaca, the seminal guides close over and meet in the midline, completing the seminal (urethral) tunnel just as in Type A. But in the male of Type B when this seminal tunnel is completed the cloacal lips, or derivatives of a special portion of them, become prominent and also grow inwards towards the midline from either side. This ingrowth of the cloacal margins takes place first at the base of the genital tubercle, and the union in the midline sweeps forwards towards the tip of the genital tubercle until the genital tubercle, with the completed seminal channel (penile urethra), is buried beneath the invading cloacal margins (labio-scrotal folds). In this way the genital tubercle is first everted from the cloaca and then, secondarily, buried beneath the ingrowing cloacal margins. The ingrowth of the cloacal margins first cuts off the hind gut opening from the cloaca, and then, burying the proximal portion of the genital tubercle deeply, it ensheathes the distal portion and binds it to the

FIG. 10.



The stages in the development of the male of Type B. In (*a*) the condition is similar to that seen in Type A, but in (*b*) the cloacal margins have begun to grow towards the middle line over the genital tubercle. In (*c*) the genital tubercle is completely ensheathed in the invading labio-scrotal folds. (Figured from developmental phases in *Equus*.)

ventral surface of the body. The whole of the "perineum" in such a case is therefore a derivative of the overgrowing cloacal margins.

Type B: Female.

In the female of Type B the genital tubercle is at first similar in all respects to that of the female of Type A, and the seminal guides pass backwards to the opening of the uro-genital sinus. In this type the reduced female genital tubercle is never unfolded from the cloaca upon the perineal surface. The seminal guides remain ununited as the labia minora; but the whole organ is left in a deep recess of the anterior portion of the cloaca by the meeting of the cloacal margins in front of the opening of the rectum. The cloacal margins therefore make the immediate boundary of the uro-genital orifice in the female, and the body of the genital tubercle with its labia minora becomes a deeply situated structure. (Fig. 11.)

It will be readily realised from this description that in embryos of Type B, since the genital tubercle is in both sexes hidden from view within a sheath formed from the cloacal margins, there may be a great similarity between the embryonic stages (and even the adult condition) of males and females. In some animals this similarity of the sexes is very striking, and it is often almost impossible to tell the male from the female when in a fœtal stage. If the genital tubercle of the male is short, or if it is retained deeply within a recess of the ventral portion of the cloaca, the sheath formed by the cloacal margins (labia majora) may be no

more prominent than the same part in the female. Again, in the females of many animals which follow this type of development the genital tubercle may be considerably elongated, and except that its seminal guides have failed to unite, it is in all respects similar to the penis of the male. In some quite exceptional instances the stages of development of the two sexes may be absolutely identical, so that in the male and the female both seminal guides (inner genital folds) and cloacal margins (outer genital folds) may meet and fuse over the genital tubercle. These extreme cases will be referred to later. It is to be noted that the similarity between the embryonic stages of the male and female is not present to the same degree

FIG. 11.

The stages in the development of the female of Type B. The small genital tubercle with its open labia minora becomes buried by the overgrowth of the labio-scrotal folds as in the male. (Figured from developmental phases in *Equus*.)

in all those animals that fall into Type B. In the Ungulates the likeness between the embryonic stages of the two sexes is nothing like so great as it is in the Rodents, among some members of which order it may be very striking (compare the phases in the fœtal horse and fœtal rabbit).

From these brief descriptions of the main features of the developmental stages in the two types it will be apparent that the adult conditions arrived at will have certain special features which will help to show the line by which the external genitalia were evolved. It would at this stage be too optimistic to hope that a mere examination of the adult external genitalia of both sexes would always suffice to determine, beyond all doubt, in which class, A or B, any given animal should be placed; but, with more extended knowledge, I believe the determination could be done in the great majority of cases with the very greatest certainty. For this reason it is now necessary to outline these adult characteristics imprinted by the two types of development.

ADULT CHARACTERISTICS.

Type A: Male.

The most outstanding feature in males of this type is the complete eversion of the genital tubercle from the cloaca. As a consequence of this process the penis tends to become a free, pendulous organ attached to the perineal surface only by its "root." This character attracted the attention of Linnæus, and partly on the strength of it he included the Cheiroptera among the Primates.

The terminal portion of the penis ends as a glans, which, though it may undergo some slight specific modifications, remains for the most part small in size and simple in its characters. This glans is covered wholly or in part by a simple reduplication of the skin of the penis which constitutes the prepuce. The prepuce may be united to the under (primitive dorsal) aspect of the glans by a frenum which runs to the immediate base of the glans area, and becomes continuous with the most distal part of the united seminal guides. The free pendulous penis being a mere extroverted genital tubercle, and having only this intracloacal structure and the seminal guides entering into its composition, is covered, as a rule, by a very fine skin which gives rise either to no, or to few and special, hairs. The raphé, which marks the line of union of the seminal guides, is continued backwards along the penile body and across the penile root towards the anus into the anterior margin of which it extends. This feature is not, as a rule, sufficiently emphasised in descriptions; but in the majority of cases it is a very conspicuous one. In the male human fœtus (as an example of Type A) the passing of the fused seminal guides within the anal margin is very obvious; in the normal human adult the same feature is almost equally striking. This is a curious instance of the perfect retention of a chelonian feature, for in the males of these animals the seminal guides pass right back to become lost only within the lumen of the rectum.

The fine skin of the genital tubercle is the site of the deposition of pigment in most of the representatives of Type A, and in some of them this reaches a very high state of development. Upon either side of the root of this pendulous penis is a very different area—the *area scroti* of Klaatsch—which is derived from the cloacal margins (labio-scrotal folds). The *area scroti* possesses very definite characters, which in many ways are in some contrast to those of the penile area; the skin is somewhat coarser, it rests upon a more dense stratum of subcutaneous tissue, and it gives rise to hairs in greater abundance than does the penile area. Moreover, a remnant of the muscle of the panniculus carnosus generally persists in this area. It is to be noted that the actual testicular sac is not always developed at exactly the same site in the cloacal margin; and, indeed, it may occupy any portion of its length. In males of Type A the scrotal pouches are found in front and to the sides of the genital tubercle (*Tupaia*), at the sides and base (*Homo*), and still further back beside the anus or even behind it (*Cheiroptera*).

Type A: Female.

There are many very distinctive features to be recognised in the female external genitalia formed according to this type. The everted cloacal margins (labio-scrotal folds) may or may not be prominent as labia majora or outer genital folds. The development of these varies greatly in different animals all of which conform to this type of development. Well marked in some of the European races of mankind, they are by no means prominent in some African and some Asiatic races, and in many individuals would hardly merit any description as folds or ridges, being marked only by their skin characters and by the presence of the pubic hair which springs from them. Even the development of pubic hair may be extremely slight in the females of some races which do not practise epilation.

In a large number of other mammals of Type A this minimal development displayed by the human female is the normal condition typical of the adult female. In most of the Primates the labia majora are but little marked, and the presence of specialised hair alone indicates their existence in Cheiroptera.

The clitoris is fully exposed upon the surface of the perineum, and it is subject to considerable

variations in size. Typically it is small and terminates in a small glans which is protected by a slight hood (prepuce) which secondarily joins the labia minora. In most cases this glans is solid, and unperforated by the ingrowth which forms the terminal portion of the urethra in the male. In *Myotis nigricans*, and probably in other members of the Cheiroptera, this terminal ingrowth develops, but does not constitute a functional canal. In some of the Lemurs a further development is seen.

The labia minora (seminal guides) diverge from the under side of the clitoris and pass backwards for a variable distance in different animals, and even in individuals representative of the same species. This variability is well displayed in the human female, for though these folds may at times pass backwards so far as to encircle the vaginal orifice, and meet to form a *fourchette*, it is more common for them to disappear altogether behind the urethral orifice at a point about halfway between the ventral and dorsal margins of the opening of the vagina. In some cases, not to be considered as abnormal, they do not extend so far back even as this mid-point. In some animals of Type A they are still more limited, and are practically confined to an area stretching from the under surface of the clitoris to the sides of the urethral orifice. Such a condition is seen in *Perodicticus potto*. In some Lemurs these seminal guides become again of functional importance.

It is to be noted that the body of the human clitoris is normally small, and that it is practically free from any groove upon its lower surface. In most Primates the clitoris reaches a relatively greater degree of development, and the urethral groove is more evident; and in some species the labia minora actually fuse over the groove and complete a urethral, though not a uro-genital, canal. In these animals the genital tubercle may be exactly similar in the two sexes, but the likeness is merely a superficial one, for functionally the two conditions are widely different, since in the male this completed groove forms a continuation of the uro-genital sinus, while in the female it functions as a urinary channel only.

In many of the females of Type A the uro-genital sinus is either altogether absent (the urinary and genital orifices both opening upon the surface of the perineum), or else it is not a very elongated canal. It therefore comes about that the hymen becomes a superficial and easily recognised structure, and this fact has led to the development of the erroneous idea that it is only in such females that the hymen exists.

Type B: Male.

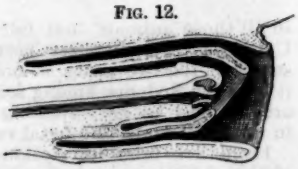
In the male of Type B the most outstanding feature is the incorporation of the penis in the skin of the pubic region. The incorporation may take place over a varying extent in different orders, in some passing as far forwards as the lower portion of the abdominal wall. The penis is no longer free and pendulous, fixed to the perineal surface only by its root, but it is bound down in the whole of its length by an ensheathing fold of the ventral skin. This at the outset constitutes a great contrast to the condition seen in Type A. The degree to which this sheath is carried forwards is, as a general rule, greater in Ungulates than it is in Rodents or in Carnivores; but whatever its extent it is always sufficient to form a complete covering for the penis in all quiescent conditions.

It must be understood that this sheath is developed from the ingrowing cloacal margins (labio-scrotal folds), and that it is therefore a part of the general body skin, or more particularly a portion of that skin in some part of which the *area scroti* is developed. The skin covering the penis in males of this type therefore partakes of the characters of the skin of the scrotal region in males of Type A; it is fairly thick, having some remnant of the panniculus carnosus persisting in it, and it is covered by the same hair that clothes the scrotum and perineum.

The actual site of the scrotal pouches varies somewhat, just as it does in the males of Type A; in some Rodents it is situated almost as far back as it is in the Cheiroptera.

Within the penile sheath the genital tubercle remains hidden. This concealed genital tubercle of course corresponds strictly to the exposed genital tubercle of the males of Type A; but it is subject to a rather wider range of variations. In the first place that portion distinguished as the glans may undergo the most marked, even fantastic, modifications; but it is, as a rule, covered by a prepuce that corresponds strictly to the prepuce developed in Type A. This prepuce is present in many representatives of most orders, but it is not invariably found in such a well-developed state as is usual in the case of the unprotected penis of Type A. This prepuce derived from the genital tubercle must be sharply distinguished from the sheath derived from the cloacal margins. It is a misfortune that the name "prepuce" has been applied without any discrimination to both these structures; even their occasional designation as "primary" and "secondary" prepuces is not a sufficiently distinct nomenclature. (See Fig. 12.)

FIG. 12.



Median section of terminal portion of the penis of a horse (from Sisson). Note the double nature of the "prepuce."

As the penis is traced backwards in its sheath it becomes buried more deeply beneath the tissues of the perineum, and, as a rule, some special development of the penile root is present to ensure full protrusion during functional activity.

One of the modifications of the adult male condition needs some attention. In some species, especially among the Rodents, the penis sheath may be very short, and the penis so thoroughly concealed within its sheath that it is extremely difficult to distinguish the male from the female unless the genital tubercle can be everted. This condition should be compared to that in those females in which the genital tubercle and its sheath are of unusual length.

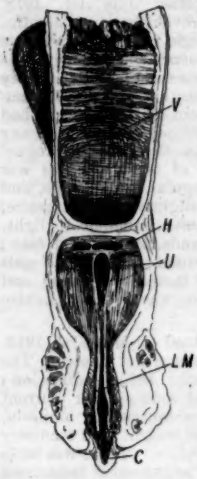
Type B: Female.

In the female of this type the cloacal margins surround a recess, which corresponds to the penile sheath of the male, and in which the genital tubercle is similarly hidden. The clitoris and its labia minora (seminal guides) are therefore concealed, and labia majora in some modified form constitute the only margins of the vulva. This vulval recess retains all the characteristics of the ventral part of the female chelonian cloaca.

The open seminal guides (labia minora) run upwards on the genital tubercle along the ventral surface of the vulval recess, at the apex of which is the urinary orifice, round the sides of which they pass to disappear upon its dorsal aspect. The

hymen in females of this type exists in the virgin condition across the mouth of the utero-vaginal canal wherever this opens into a "uro-genital sinus." Just as the labia minora are concealed in these animals, the hymen itself lies deep within the female passages, and so frequently escapes observation. Nevertheless, all the conditions that are characteristic of the females of Type A could be reproduced simply by everting the vulva of Type B. (See Fig. 13.)

FIG. 13.



Lower end of vagina and uro-genital sinus (vulva) of a young pig. Note the concealed hymen and labia minora. V, Vagina. H, Hymen. U, Urethral opening. LM, Labia minora. C, Clitoris.

Between this vulval orifice, surrounded by its labia majora, and the anus a bridge of tissue exists which constitutes the perineum, but the anatomical basis of this perineum is quite distinct in these animals. In Type A the perineum consists of the extroverted summit of the cloaca, but in females of Type B it is composed of the cloacal margins that have met and united in front of the anus.

We have already seen that in the male of this type the genital tubercle may be so completely concealed, and the sheath be so short, that the likeness to the female may be very great. One other condition remains to be considered. Females of Type A have already been described in which the genital tubercle approaches to a masculine degree of development, so much so that in some Primates it again becomes a urinary canal by the closure and union of the labia minora. Similarly in females of Type B these approximations to the male condition occur, and in some instances are far more profound than anything previously described. In some females of Type B it is not only the urinary, but even the genital canal, that is closed in and carried to the tip of the genital tubercle; in this way the male and female condition becomes exactly similar. In some animals this condition is only temporary; in some, however, it is apparently permanent. [The condition present in the mole, the spotted hyæna, the South American hare, and some other animals was then described.]

UNIVERSITY COLLEGE, LONDON.—The report of this College of the University of London for the year ending February, 1914, which has just been issued, shows that the number of students attending during the session 1912–13 was 2083; of these, 137 attended the department of the faculty of medical sciences. For the year ending August 31st, 1913, the total revenue of the College from all sources amounted to £66,694 2*s*. 8*d*., being an excess of expenditure over income of £173 10*s*. 4*d*. Among the new buildings that are in progress are a large block for the new chemical laboratories and the building for the purpose of housing the department of applied statistics and eugenics, including the biometric and Galton laboratories. These buildings, however, cannot be completed until adequate funds are forthcoming. The total at present needed to complete the most pressing works in hand is £58,262, of which £28,652 are required for the new chemical laboratories. A special committee, with Prince Arthur of Connaught as president and the Hon. Rupert Guinness as treasurer, is occupied in the task of raising these funds.

INTRASPINOUS TREATMENT (SWIFT-ELLIS) OF GENERAL PARALYSIS:

A PRELIMINARY NOTE ON FOUR CASES TREATED BY THIS METHOD.

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AND

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SINCE the description by Swift and Ellis at a meeting of the New York Neurological Society in April, 1913, of a new mode of treatment for parasyphilitic diseases of the nervous system by the injection into the spinal subarachnoid space of salvarsanised serum, a considerable number of such cases have been treated by this method in America,[1] but relatively few have been recorded in this country. The presence of the spirochæta pallida can be demonstrated post mortem in a majority of cases of so-called parasyphilitic diseases of the nervous system, it has been cultivated from the brain tissue of the living general paralytic, and the rabbit has been infected by means of the serum of the general paralytic. These findings indicate that general paralysis is, at any rate in the majority of cases, a true syphilitic process depending upon the presence and activity of the organism itself. The difference between the course of general paralysis and that of other syphilitic lesions of the brain would appear to be due to the different distribution of the organisms in the two cases; in general paralysis they are found in the cortical and subcortical tissue spaces, away from the blood-vessels, and so, inaccessible to the influence of antisyphilitic remedies circulating in the blood stream, hence the failure of the treatment of the disease by intravenous administration of salvarsan as well as by the older antisyphilitic remedies. The cerebro-spinal fluid bears the same relation to the neurone as the lymph to the ordinary tissue of the body, and it is noteworthy that, after the mere introduction of salvarsan into the blood stream, the presence of arsenic in the cerebro-spinal fluid has never been demonstrated, whereas it is especially in that fluid that one finds chemical changes resulting from the altered metabolism of the neurone in general paralysis.

A hopeful line of treatment for this disease would seem, therefore, to be an attempt to destroy the organisms by spirochæticidal substances introduced directly into the cerebro-spinal fluid. The intraspinous injection of salvarsan itself is contraindicated by the meningitis to which it gives rise. It has, however, been demonstrated that the blood serum after intravenous injection of salvarsan possesses a strongly marked destructive action on the spirochæta—this action, in the opinion of most observers, being quite out of proportion to its actual salvarsan content—and such serum can be introduced into the subarachnoid space without any harmful effects. The readiest access for the introduction of the activated serum is afforded by lumbar puncture, this being the method described by Swift and Ellis and also that used by the present authors. Dr. Levaditi, Dr. Marie, and Dr. Martel have modified the procedure by introducing the serum under the cerebral dura through a trephine hole on

[1] W. H. Hough and G. W. M'Caskey: Journal of the American Medical Association, Jan. 17th, 1914.

each side of the skull,[3] the advantage claimed being greater assurance that it should reach the cerebral cortex. However, such heroic surgery would not appear to be necessary as Dr. Cotton, in two cases of general paralysis which died during the course of treatment by the intraspinous method, found salvarsan in the ventricular fluid.[3] It has also been shown that if phthalein be introduced by lumbar puncture into the subarachnoid space, and two hours later fluid is withdrawn simultaneously from the ventricles and through a lumbar puncture, phthalein is to be found in both, though the spinal fluid contains double the proportion found in the ventricular fluid.[4] Further, it was noted by the late Dr. Loomis that after argyrol was introduced into the spinal subarachnoid space it was to be found at necropsy distributed over the cerebral cortex.[5]

The technique of the process as originally described by Swift and Ellis and as carried out by ourselves is briefly as follows. 1. The intravenous injection of 300 c.c. normal saline containing 0·4 grm. salvarsan neutralised with caustic soda. 2. One hour later the removal of 40 c.c. of blood. This is centrifugalised and 12 c.c. of the serum obtained is diluted with 18 c.c. of normal saline, the mixture being then heated for half an hour at 56° C. 3. The intraspinous injection, after removal of an equivalent quantity of cerebro-spinal fluid, of the 30 c.c. of this diluted serum prepared as above. The whole process was repeated four times at intervals of two weeks between Oct. 28th and Dec. 9th, 1913, and a final repetition was carried out on Jan. 5th, 1914.

The Wassermann reaction was quantitatively estimated at Claybury Laboratory in specimens of blood taken before and after the intravenous injection of salvarsan on each occasion, and we may here note that there was never any difference in intensity in the two specimens. A similar estimation with an examination as to the globulin and cell content was performed on samples of cerebro-spinal fluid removed before the intraspinous injection at each sitting. The method used for the estimation of the Wassermann reaction was that devised by Candler and Mann, and shortly to be published in the *Archives of Neurology and Psychiatry*, Vol. VI.

The four patients selected for the treatment were cases showing but a very slight grade of deterioration, as it was felt that if arrest of the disease could be effected the results would be of much greater value if the process of actual destruction of the nervous elements had not preceded very far.

The following is a short summary of the history of each case and of the conditions existing at the time of commencement of treatment.

CASE 1.—A male, aged 40, admitted on June 18th, 1913. Syphilis was admitted 20 years before; no treatment and no secondary symptoms. First symptoms noted two and a half years before, consisting of attacks of vertigo and anxiety, decrease of sexual appetite, and outbursts of intemperance. More recently attacks of confusion with auditory and visual hallucinations, persecutory delusions, and excitement. On admission he was in a confused state with partial amnesia for his recent excited periods, but with considerable insight into their morbid character and distress therent. There was little genuine dementia, either intellectual or emotional. Before the commencement of treatment he varied considerably, showing at times marked confusion with hallucinations, and occasionally betrayed depression with suicidal tendencies. With regard to physical signs, speech was slow and clipped; the pupils were contracted, unequal, irregular, and both quite immobile to light; all movements were slow; there were tremors of the tongue and the hands; station and gait were both unsteady and the knee-jerks were exaggerated. The Wassermann reaction was strongly positive in blood and cerebro-spinal fluid.

CASE 2.—A male, age 33, admitted July 1st, 1912. Syphilis was admitted 13 years previously; two months' treatment. He had felt dull and anergic for two years before admission, with depression due to quarrels with his wife who drank. On admission he was still depressed, self-accusatory and apprehensive, the result of auditory and visual hallucinations. At the date of commencement of treatment he had improved remarkably, and it was difficult to determine any abnormality, either intellectual or emotional. With regard to physical signs, articulation even of test sentences was normal; the pupils were slightly irregular, rather large, and equal in size; the left reacted very slightly to convergence, the right not at all; both were quite immobile to light. There were marked tremors of the hands, tongue, and face; coördination and sensation were normal; station and gait were normal. There was marked increase of knee and supinator jerks. Wassermann reaction was strongly positive in blood and cerebro-spinal fluid.

CASE 3.—A male, aged 58, admitted on May 31st, 1913. Syphilis was admitted, but the date was not known. The first symptoms were noted 15 months before admission; there was sudden onset of marked amnesia for current events. On admission there were instantaneous amnesia, fabrication, euphoria, complete lack of insight, and tendency to make ill-considered plans for the future. There was little general dementia; he was capable of arithmetical deductions and of a correct and collected account of all events of his past, except those of the previous 15 months. At the time of commencement of treatment he showed practically no change. As to physical signs, speech was a little indistinct in articulation for consonants; the pupils were medium and unequal, the right being larger than the left, and were irregular and inactive to light. There were tremors of the tongue and hands; movement of the limbs was clumsy; station was steady, the gait a little unsteady and spastic; and the knee and supinator jerks were brisk. Wassermann reaction was strongly positive in blood and cerebro-spinal fluid.

CASE 4.—A male, age 52, admitted on August 7th, 1913. Syphilis was denied and physical signs were absent. The first mental symptoms were noted 20 months before. After a fall while at work he developed numerous disconnected delusions, and since then he had done no work and had shown marked confusion from time to time. On admission the mental state varied a good deal. At times he showed no gross intellectual defects, though he was always apathetic and lethargic. There was also a marked incongruity between his apathy and his continual complaints as to his health. No definite delusions could be elicited. From time to time, however, he displayed considerable amnesia for his past life and confusion as to his present surroundings. At the date of commencement of treatment, Oct. 28th, the confusional periods had ceased to occur, there was no amnesia, but he showed a general weakness of judgment. With regard to physical signs, the voice was monotonous, articulation was stumbling and explosive; the pupils were medium, equal, and regular; reaction to light and accommodation was very slight. There were well-marked tremors of the face, tongue, and hands; overaction of the facial muscles and clumsiness of all movements. The ordinary gait was shuffling; he could, however, walk heel-and-toe along a line with little difficulty. There was no Rombergism; the patellar and supinator jerks were very brisk. The Wassermann reaction was strongly positive in the blood and cerebro-spinal fluid.

The reaction immediately following the treatment was slight and diminished in severity with each repetition, the symptoms noted being vomiting, dizziness, slight pain in the head, neck, back, and legs. The occurrence of these, however, was not constant. A rise in temperature, maintained for 30 hours on the first occasion and diminishing in range and duration on each successive occasion,

[3] Levaditi, Marie, and Martel: Comptes Rendus de la Société de Biologie, Dec. 19th, 1913.
[3] W. Cotton: Journal of Nervous and Mental Disease, January, 1914.
[4] W. Swift: Ibid.
[5] Quoted by W. Leszynski: Ibid.

was observed. All four patients exhibited a remarkable similarity in this respect; at no time was the condition of any of them alarming.

An almost identical reaction, and no lasting change in the patients' condition, followed a set of preliminary experimental procedures on Sept. 26th, 1913. These were designed to test individually the effect of different stages of the treatment, omitting the use of salvarsan, and they were as follows:—Case 1, intravenous injection of 300 c.c. normal saline; Case 2, intraspinous injection of 30 c.c. normal saline; Case 3, intravenous injection of 300 c.c. normal saline and intraspinous injection of 30 c.c. normal saline; Case 4, intravenous injection of 300 c.c. normal saline and intraspinous injection of 30 c.c. diluted serum prepared in a manner similar to that used in the actual treatment.

The changes observed in the conditions of the patients since the commencement of the treatment may be classified under the following heads: (1) changes in the mental state; (2) change in the physical signs of the disease; and (3) changes in the Wassermann reaction.

The changes in the mental state have not been strikingly favourable. Case 1 passed through an attack of hallucinosis, both auditory and visual, without marked clouding of consciousness, immediately following the second repetition of the treatment and lasting about 14 days. Since then he has shown some tendency to euphoria, and though remembering his former hallucinatory periods and recognising their subjective character he is lacking in a correct insight into their gravity. His memory, however, remains good and he is more active and interested in his surroundings. Case 2 remains practically normal. Case 3 shows the same amnesia for current events and of all those since the manifest onset of the disease with the same tendency to fabrication. A few surprising instances of the retention of isolated memories, however, have been noticed. He looks brighter and shows no sign of progressive dementia. In Case 4 the patient's general dulness persists unchanged, without evidence of progressive dementia. Confusional periods, such as were observed previous to the treatment, have not occurred lately.

The changes in the physical signs are as follows. In Case 1 the tremors have entirely disappeared, and the station, gait, and coördination are normal. The pupils are medium in size, equal, regular, and react almost normally in speed and extent. Some analgesia is present. In Case 2 the pupils now both react slowly to convergence and the left only to light; no other change is to be noted. In Case 3, about the beginning of February the pupils were practically normal in form and reactions, but since then have shown a tendency to return to their initial condition. There has been some diminution of tremors and some improvement in coördination. In Case 4 there was a temporary improvement in the condition of the pupils, but this has again disappeared. The tremors are gone and the tendon reflexes are a little less exaggerated.

With regard to the Wassermann tests, the quantitative estimation of the Wassermann reaction in both blood and the cerebro-spinal fluid showed no change whatever: in all cases the reaction in both remains as strongly positive as it was before treatment. The cerebro-spinal fluid in addition was examined for the presence of globulin and excess of cells, and both those conditions were present throughout.

As only five months have elapsed since the date of commencement of treatment, it is obviously impossible to draw definite conclusions. While it is true that in none of the four cases has any progressive deterioration in the mental state occurred, yet it must be remembered that remissions equalling in degree those seen in our patients occur in 7 per cent. to 8 per cent. of general paralytics; moreover, the average duration of such remissions being 11 months, the arrest of progress in our cases is not yet sufficiently prolonged to constitute evidence that the evolution of the disease has been altered.[6]

With reference to the changes in the physical signs, it must be noted that alternating states of the reflex activity of the pupil to light occur in about one-third of cases during the first and second stages of the disease; too much stress, therefore, must not be laid upon such variations as have been observed in our cases.[7] The improvement in the general coördination and the diminution of tremors is only such as commonly accompanies states of remission in the ordinary course of the disease. In our opinion the persistence of the Wassermann reaction in both blood and cerebro-spinal fluid is strong presumptive evidence of the failure of the treatment, for whatever may be the actual genesis of the reaction, it is now generally accepted as indicating the continued presence of the living spirochæta. Furthermore, this persistence of reaction must be due to the presence of the organism under conditions rendering it refractory to salvarsan in the blood stream, and this is characteristic of the disease.

An analysis of cases of general paralysis treated by this method described by other observers, mainly American, shows little ground for the generally hopeful attitude adopted in regard to the treatment, for none of them appear to have produced changes in the mental or physical conditions other than such as are to be seen with almost equal frequency during the untreated course of the disease, and, while in several of the published cases changes in the cell and globulin content of the cerebro-spinal fluid have been noted, in none has any claim been made that the Wassermann reaction has been abolished in either the blood or the cerebro-spinal fluid. Even if disappearance of the Wassermann had been found during treatment, the cure of the disease would be unproven, as periods in which the reaction is temporarily absent have been shown to occur during its ordinary course.

Our thanks are due to Dr. F. W. Mott, the director of the Claybury Laboratory, and to Dr. J. P. Candler, who so kindly carried out the numerous examinations of the specimen fluids on each occasion.

[6] H. L. Paine: A Statistical Study of Remissions in General Paralysis of the Insane, Boston Medical and Surgical Journal, 1913, p. 684.

[7] De Montyel: Archives de Neurologie, June, 1905.

ROYAL INSTITUTION.—On Tuesday next (April 21st), at 3 P.M., Dr. Walter Wahl will deliver the first of two lectures on "Problems of Physical Chemistry"—(1) "Study of Matter at High Pressures," and (2) "Study of Matter at Low Temperature." On Saturday, April 25th, Dr. T. E. Stanton commences a course of two lectures on "Similarity of Motion in Fluids"—(1) "The Theory of Similarity of Motion in Fluids and the Experimental Proof of its Existence," and (2) "The General Law of Surface Friction in Fluid Motion." The Friday evening discourse on April 24th will be delivered by Dr. Frank Watson Dyson, the Astronomer Royal, on "The Stars Around the North Pole," and on May 1st by Mr. E. F. Benson on "A Criticism on Critics."

TONSILS AND ADENOIDS IN CHILDREN:

A PLEA FOR FEWER OPERATIONS.[1]

BY T. B. LAYTON, M.S. LOND., F.R.C.S. ENG.,
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DURING the last year or so discussion has centred so much around the relative values of tonsillotomy and tonsillectomy that we have had no time to consider whether the total number of operations upon the tonsils or for adenoids is more than it should be.

Even though we do not *know* the function of the tonsils, faucial, pharyngeal, and lingual, we have very good reasons to *believe* that these form an early and very important line of resistance to micro-organisms which invade the body through the mouth and nose, and so when we find these organs enlarged we must not at once infer that they are the cause of any surrounding inflammation. It may be that they are enlarged in consequence of it, when our treatment must aim at removing the cause of inflammation rather than at removing the lymphoid tissue which is hypertrophied as a result of it.

I will assume that we are all agreed that the two indications for removing tonsils, faucial or pharyngeal, are because they are the cause of some inflammatory lesion, or because they are causing some mechanical obstruction to the functions of the nose, mouth, or ear. You will probably agree with me that in children the pharyngeal hypertrophy is more important than the faucial, for faucial tonsils have to be very large indeed to cause mechanical trouble to breathing, swallowing, or speaking; further, that the infective sequelæ of the adenoids are dependent upon the mechanical effects of obstruction to the posterior nares or Eustachian tube. In the faucial tonsil we recognise that the flat fibrotic organ with each crypt a bag of pus is the cause of repeated sore-throats and should be removed, but I maintain that these are not common in children, and that the number of tonsils which we see that can definitely be called the cause of sore-throats is small. Now in estimating the degree of obstruction from adenoids or the size of enlarged tonsils we must eliminate two fallacies: we must not come to a conclusion just after an acute attack has got better, nor until any other source of septic infection has been removed. Both these fallacies are, I believe, the cause of a large number of unnecessary operations. A child has a cold, the tonsils are enlarged, and he snores at night; the conclusion is at once made that he suffers from "tonsils and adenoids"; he is seen again at the end of a week, the cold is quite better, the child is well again, but the tonsils are still large, there is still a nasal intonation in the voice, and the operation is performed. If the tonsils be examined critically at this stage it is seen that they are covered with an excess of mucus, that their colour is a redder one than that of the surrounding mucous membrane, and that they have an œdematous appearance distinct from the white, firm look of the true hypertrophied tonsil. If the parents are cross-questioned you learn that the snoring has only been on while the child has the common cold, and that there have been no ear symptoms except during that time. If such a case as that is left for a month while the general health is attended to, a further examination will show in a very large number of cases that the tonsils have become quite small again, and that the adenoid symptoms have entirely disappeared. During this time there will have been time to attend to a common source of sepsis—I mean teeth. I believe that when the rule is made of having all carious teeth in children attended to before an operation on tonsils and adenoids is done, a very large number of these operations is avoided; this is so, both in the cases seen after an acute attack and in those which come up with slight symptoms of snoring and deafness from adenoids associated with enlarged tonsils. The frequency with which one sees all the permanent first molars carious before the child is 10 is a very sad thing: four carious teeth are, I am sure, enough to keep up a chronic pharyngitis which leads to a hypertrophy of the lymphoid tissues of the neck. A personal explanation of how I came to these conclusions may not be out of place at this stage.

Some four or five years ago, when the inspection of school children under the Act of 1907 was being done, but the treatment had not yet been organised, the throat departments of our hospitals were flooded with children returned by the inspectors. So many there were on the books to come into the throat beds at Guy's Hospital that they sometimes had to wait three, four, or five months before admission. During this time we had their teeth attended to; the parents taught them nasal breathing exercises, and we treated any general disorder that needed it. Time and time again, when they were admitted to the hospital, I found that no operation was necessary; sometimes they were sent out again without anything being done; often an anæsthetic was given, and on putting the finger on the nasopharynx no adenoids could be felt. These things taught me definitely that operation is not the only treatment for these conditions, and that in many cases operation was being advised where it was unnecessary. We may consider these things separately.

I have already dwelt upon the importance of carious teeth. I would now impress upon you the importance of breathing exercises. Most people agree that these are valuable; I would say they are essential. I consider that no operation is completed unless these be done regularly and deeply for two or three months afterwards. I believe that in a very large number of cases the operation is unnecessary if they are efficiently done, and that very many operations are useless unless they are done. I admit that it is tiring day after day to tell parents to teach their children to breathe through the nose when you know that in a large number of cases it is never done, but I consider it is wrong to advise an operation unless the parent is told at the time that this operation is only a preliminary, or at any rate only a part of the fuller treatment. If one holds these views as to breathing exercises one sees that it is no argument to perform an operation because the parents will not carry them out.

That dyspepsia of the second dentition which has been called by Dr. Eustace Smith "mucous disease" is another thing to which I would draw your attention. First, some of its symptoms resemble those of adenoids; the cough for which so many children are sent to have their adenoids removed is often the "stomach cough" of our grandparents; the grinding of teeth is often mixed up by careless parents with snoring at night time. Secondly, as a result of the disease the lymphoid

[1] A paper read before the Medical Society of London on March 30th, 1914.

tissue all over the body becomes increased, and the pharyngeal and faucial tonsils, which are but masses of lymphoid tissue, are enlarged also. I see no reason, except one of ease, why we should remove these in such a case any more than do a laparotomy and excise one Peyer's patch, or a thoracotomy and cut out the thymus gland. Other observers beside myself have commented upon this relationship between mucous disease and enlarged tonsils, and have said that the removal of the tonsils makes the mucous disease much better; I, on the other hand, find that by treating the mucous disease we can escape in a number of cases the operation with its attendant discomfort and risks, both immediate and remote. How, then, can we decide whether an operation is necessary or not? First, we must have some definite positive indication that the lymphoid tissue present is doing harm, and not operate merely on chance to improve the general health, because it happens to be in excess. Secondly, we must assure ourselves that this is a local disease and not a part of a general lymphoid enlargement all over the body. Thirdly, we must try to decide whether the lymphoid enlargement is a permanent one or merely a transient one due to a recent infection or secondary to carious teeth. Lastly, we must exclude any contraindication which is likely to increase the danger either of operation or of possible sequelæ out of proportion to the advantages we hope to gain.

I find some students who work under me talk of operation for tonsils and adenoids as one being devoid of any risk. So far do I disagree with this that I would say that no operation equally small carries with it so many risks. I have never met with one of the cases of severe hæmorrhage which undoubtedly occur, but the list is long enough without them. There is the undoubted risk of the anæsthetic, which is given almost universally in this country. It is useless to deny that children do become almost pulseless when the operation has been done; I ask anyone who has had much experience if he has not had many an anxious moment with these cases? I have had three times to take a patient into the hospital who had been operated upon as an out-patient, and once nearly had to do a tracheotomy for a tonsil that had slipped out of the guillotine and become impacted on the upper opening of the larynx. Further, there is a considerable number of deaths under the anæsthetic with this operation. Dr. B. H. Spilsbury has kindly lent me the manuscript of a paper not yet published in which out of 104 cases of death during anæsthesia six of them were for the operation of "tonsils and adenoids" in children. If we consider only those which have died from the anæsthetic the proportion is higher.

Infection is the cause of the other sequelæ. The least of these is a severe sore-throat which makes the child thoroughly ill for from several days to a fortnight; such a complication is sure to occur in some cases, and it is our business to make these cases as few as possible. Acute otitis media, pneumonia, and metastatic abscesses are the most serious complications. I have seen the first several times; once I saw an acute osteomyelitis of a rib in a child who had had the operation done a week before, and who was suffering from a very severe pharyngitis as a result. The history of the throat beds at Guy's Hospital exemplifies the importance of the second. When the department was first made it was in the hands of an assistant surgeon, Mr. Charters J. Symonds, who took the bigger cases into his own beds, and the "tonsils and adenoids" operations were done in the out-patient department; a series of children had to be taken into the hospital for pneumonia, which resulted in certain beds being set apart for these cases. As the department increased these became throat beds, and again operations were done in the out-patient department. I believe that if cases were more carefully followed up we should find a greater number of instances of pneumonia after the operation. Under the London County Council I am now in charge of one of their clinics attached to the St. George's Dispensary in Southwark. The cases are there followed up by lady clerks of the Council, and if the cases do not return after the operation they are traced to their homes. During the month of September I had two cases of pneumonia occurring after the operations, in neither of which had there been any raised temperature before the operation, nor had there been any acute cold or sore throat for many weeks before the operation; in one case no anæsthetic was given. These cases show that we cannot eliminate post-operative pneumonia as a factor in these operations.

Measles, scarlet fever, and diphtheria may also be looked upon as post-operative complications. I do not mean that the operation causes the acute specific disease, but rather that it is done during the incubation period. If such be the case, it is very obvious that the child runs greater risk during the disease if such an operation has been done just before.

How are we to prevent the occurrence of these acute post-operative inflammations? I find I have had far fewer since I have followed the rule laid down in Professor Killian's clinic, never to operate if the temperature be above 99° F. I believe that in this way you eliminate not only cases sickening for measles and scarlet fever, or many cases likely to get acute otitis or pneumonia, but also that you eliminate cases where the lymphoid enlargement is the result of some temporary inflammation. Everyone agrees that these operations should be done in the quiescent period, the disagreement lying in determining when the quiescent period has arrived.

I do not intend to go into the question of anæsthesia now, but I may say that I find that the bad sore-throat following the operation is much less frequent when no anæsthetic has been given; routine formalin tablets for a few days are also a good thing. Also, I think it is much better to do no operations on out-patients during the winter months. If they cannot be done at home or taken into the hospital for a night or two it is far better that they should wait until the spring than have an anæsthetic, and an hour or so later be sent out with a wound in the throat into a London fog or a drizzle of rain.

In rheumatism and allied conditions the case is different from the other acute fevers. Here, I believe, the operation determines the attack. I have had three cases of attacks of chorea definitely beginning after an operation on the throat; one was most intractable, and kept the child away from school for over six months. The complete removal of the tonsils does not prevent further attacks of rheumatism. In the adult who suffers from slight attacks of pyæmic arthritis which are called "rheumatism," removal of a septic tonsil may cure the attacks, but I do not think it is so in true rheumatism. In January, 1913, I enucleated the tonsils of a girl who had rheumatism, and the operation was followed immediately by another

attack, another followed in April, another in June, and another in September. She gets her sore-throat though there is no tonsillar tissue left. "Assuming," said Mr. T. Jefferson Faulder at the Seventeenth International Congress of Medicine, "that the tonsil is the site of infection in rheumatism, &c.": I maintain that we have no right to assume it, and if this is correct there is no more reason for us to remove the tonsil than there is for the general surgeon to do an arthrectomy of the ankle-joint. At the same meeting Mr. Pybus said that he was enucleating tonsils for chorea. So far from enucleating for chorea, in a case where there is any suspicion either of chorea or of true rheumatism, I do not do an operation unless the indications are of the strongest and all other treatment has failed.

I know of no operation in surgery where so much good is so easily done to a patient as when an operation for tonsils and adenoids has been performed in a carefully selected case, and it is for this reason that I think the points that I have brought forward are worthy of consideration; for if we do the operation in unsuitable cases it will needlessly fall into disrepute. But it is not only we specialists who should pause to think whether we are doing too many operations. The general physician, surgeon, and practitioner must also review the position and not imagine that the laryngologist has a panacea for all the ills of a child whose tonsils project beyond the anterior pillar of the fauces. At the International Congress of Medicine Professor Friedreich, of Kiel, and Sir Felix Semon both laid stress on the fact that the pendulum has now swung the other way, that cases often are sent to us for operation on the tonsils to cure all sorts of diseases, and we must strenuously resist such a tendency.

In the light of such thoughts we may consider the cases which return after an operation unrelieved in their symptoms and with the lymphoid tissue grown again. We need not look upon these as being badly or incompletely done, but rather consider whether they were unnecessarily done, or that after-treatment was not done. When such a case comes to me I often find that carious teeth have not been attended to, that no after-treatment has been ordered, or if ordered has been most inefficiently carried out; and I would put it to you that in such cases we should rather stay our hands than believe that because no good has been done a further operation is necessary.

Queen Anne-street, W.

PARTIAL GASTRECTOMY FOR GASTRIC ULCER RECURRING AFTER GASTRO-JEJUNOSTOMY.

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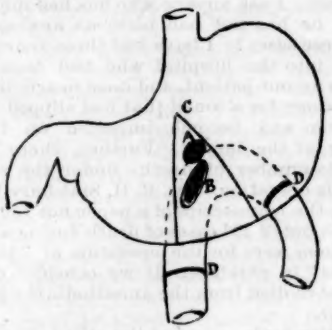
THE report of a case of transgastric excision of a gastro-jejunal ulcer by Sir Berkeley Moynihan and Dr. E. T. Tatlow in THE LANCET of March 14th makes me think it may be of interest to record a case in which I had to perform excision of a somewhat similar ulcer, though by a different method.

The patient, aged 38, was admitted to the Royal Free Hospital under my care in 1909 suffering from a perforated gastric ulcer. I opened the abdomen and sutured a perforated gastric ulcer on the anterior wall close to the pyloric end. This so narrowed the pylorus that I considered it advisable to perform gastro-jejunostomy there and then. The patient made an uninterrupted recovery and was completely restored to health, though she had been an invalid for ten years owing to the gastric ulcer. Two years later, however, she got a return of pain after food, which persisted in spite of careful diet and bismuth. Suspecting that she had developed a jejunal ulcer she was advised to undergo a strict "rest and diet" cure for two months. As she was not improved by this I advised her to submit to another operation.

On opening the abdomen I found that so far as the new opening was concerned there was no sign of contraction. (Incidentally, I may state that in no case in which I have reopened the abdomen after gastro-jejunostomy have I ever seen evidence of contraction.) The distal and proximal loops of the jejunum were certainly not the seat of ulceration. On palpating the stomach, however, I discovered that there was an infiltrated area around an ulcer situated on the posterior wall about half an inch superior to the anastomosis opening. I was then faced with the problem of what to do. Here was a patient with a perfect gastro-jejunostomy, supposed to cure gastric ulcer, and therefore still more to prevent its development. Moreover, she was not influenced by medical treatment. Excision of the ulcer thus seemed the only possible hope for her. Situated as the ulcer was, close to the anastomosis, I could not excise it without so interfering with the junction as to render it useless, even if I could have overcome the technical difficulties of such a procedure. The only possibility which occurred to me was to excise the junction and that area of the posterior gastric wall which contained the new ulcer. This involved an excision of a considerable wedge of the stomach and the loop of jejunum which took part in the anastomosis (see figure). The stomach wall



Diagrammatic representation of an ulcer recurring two years after gastro-jejunostomy and the operation of partial gastrectomy, including the anastomosis opening. A, Recurrent ulcer. B, The gastro-jejunostomy. C, The lines of excision of the posterior gastric wall. D, The lines of division of the proximal and distal loops of jejunum.

was then united by two rows of continuous sutures, beginning above and leaving a sufficient opening below to permit of anastomosing the distal part of the jejunum to it. The short proximal end of the jejunum was then inserted into the side of the distal loop, thus leaving the patient with a Roux's, or Y-shaped, anastomosis. Again the patient made an uninterrupted recovery.

This operation is rather a formidable one, especially when a no-loop junction has been made and I feel that if I had to deal with a similar

condition again I might be tempted to adopt the procedure suggested by Sir Berkeley Moynihan, the transgastric method.

Many years ago I adopted this mode of attack for dealing with hæmorrhage consequent upon the performance of gastro-jejunostomy. In my earlier cases I had two in which post-operative hæmorrhage occurred. I immediately reopened the abdomen, and then made an incision in the anterior wall of the stomach. By means of two fingers on the posterior gastric wall it was simplicity itself to evert the junction through the anterior wound and tie the bleeding point, which in each case was a vessel (probably half divided) at the pyloric end of the wound. Each made a perfect recovery. The method is so simple compared to interfering with the junction from the outside and possibly getting leakage that I should always adopt it if such an accident should occur again. I think it taught me, also, that the most likely reason for hæmorrhage is a largish vessel at the pyloric end, partially divided, and since I have taken special precautions to stitch very closely at that point I have not had a case of hæmorrhage.

The transgastric method of excision of a recurrent ulcer had not seemed to me advisable on account of the difficulty of putting in the peritoneal continuous Lembert suture if the anastomosis had not been previously excised, but Sir Berkeley Moynihan's adoption of a temporary gastrostomy with the tube going into the distal loop of the jejunum apparently overcomes what might appear to be not an ideally water-tight method of union. The lesser severity of the transgastric method, however, appeals to me as possibly the best measure to adopt in most cases.

Upper Wimpole-street, W.

CONTRIBUTION TO THE TREATMENT OF DUODENAL FISTULA;

WITH THE REPORT OF A SUCCESSFUL CASE.

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A YEAR ago a paper was read before the Surgical Section of the Royal Society of Medicine[1] in which a new and simple method for the treatment of perforated gastric and duodenal ulcers was described. It was named by its author "treatment by tamponade." The novelty of this treatment resides in the fact that no attempt is made to suture the perforation: the aperture in the ruptured viscus is merely plugged with a strip of gauze which is allowed to emerge from the abdominal wound. In this paper it was stated that the method had been employed in 15 cases, that no deaths had occurred in this series, and that no fistulæ had resulted. Its originator, after a further trial, has recently[2] again advocated the adoption of this procedure, only, however, citing two cases of ruptured stomach, in one of which a gastric fistula resulted, but healed in ten days.

To discredit the value of the operation in the treatment of perforated gastric ulcers because a fistula occasionally develops after it would be wholly unjustified, unless it could be shown that there do not exist compensatory advantages of greater weight. But in the case of the duodenum no possible advantages could counterbalance the serious drawback of an increased incidence of fistula formation following operation. A gastric fistula frequently closes spontaneously, and even if it never closes life may be maintained for years, as was illustrated in Alexis St. Martin. And this is not altogether exceptional, as the results of gastrostomy for fibrous stricture of the œsophagus have demonstrated. As far as can be ascertained from the writings of the last ten years, a duodenal fistula never heals without surgical aid, and if left is invariably fatal. Moreover, death may be exceedingly rapid. Thus Berg records a death which occurred three days after the establishment of a fistula. Just how frequently a fistula occurs after the suture of a perforated ulcer is difficult to gauge accurately, as there are no statistics available. Such failures are apt to remain unrecorded. The case described here is an example. Struthers[3] refers to 2, Dickie[4] mentions 1, and 2 are described by Berg.[5] Many such must have occurred. But it is probable that the frequency of fistula formation would be greater if no attempt were made to suture the ulcer. Thus in the collective report on perforating duodenal ulcer at Edinburgh[6] there were only 3 fistulæ in 200 cases, and these were the only 3 cases where the ulcer was not sutured. The patients all died in a few days. Recovery from a duodenal fistula, even with adequate surgical treatment, is a rarity. Only 3 cases are to be found in the writings of the last ten years. They were cases treated by Berg,[5] Knaggs,[7] and Souttar.[8] In none of these successful cases was the surgical treatment identical with that pursued in the following case:—

The patient, a thin man, aged 45 years, was admitted to St. Mary's Hospital on Jan. 23rd, 1914. He had a history of an illness of five months' duration. Pain occurred two hours after meals and was relieved by taking food. Occasionally there was vomiting and once there was melæna. Twenty-four hours before admission to hospital the patient was seized with agonising pain in the upper abdomen. Vomiting occurred several times at the onset of the attack and then ceased. The pain had gradually got better and the patient felt so well that he could with difficulty be persuaded that there was anything serious amiss. The abdomen was rigid all over, but muscular spasm was most marked over the upper part of the right rectus. Tenderness, whilst present to some extent all over the abdomen, was most marked over the left upper rectus; the next most tender area was the right iliac fossa. Very unusually, although the recto-vesical pouch of peritoneum bulged, there was no tenderness per rectum. Dulness was present in each flank and in the hypogastrium. The liver dulness was not obliterated. The pulse was 120 and the temperature 98·4° F. The diagnosis of perforated duodenal ulcer was made, and the abdomen was opened through the right rectus muscle. Some free gas escaped. The abdominal cavity was filled with thin purulent fluid. A perforation with a diameter rather less than that of a lead pencil was found in the centre of a large ulcer situated in the anterior wall of the first part of the duodenum. Two Pagenstecher thread sutures were passed through the whole thickness of the edges of the hole and tied. A vertical row of Lembert thread sutures buried the perforation. The closure appeared secure. A gauze drain was carried down to the site of the perforation and a tube inserted into the pelvis. All went well until the fourth day after operation (Jan. 27th), when the gauze emerging from the upper wound was withdrawn. It was followed by a small amount of thin sour discharge. Next day the discharge increased greatly in amount and was bile-stained. After this the discharge of green bile-stained fluid was very profuse. Food was withheld by mouth, an attempt was made unsuccessfully to feed rectally, and glucose and saline injections were administered freely. Milk given by the mouth was seen emerging from the fistula within a few minutes. The rectal washings contained very little fæcal material, and this was pale in colour when the fistula was fully established. On the fourth day after the development

of the fistula (Jan. 31st) the condition of the patient was desperate. He lay with sunken cheeks and eyes, his voice was hoarse, his eyesight was failing, and the temperature was subnormal. Emaciation was extreme. He was thought to be dying. The wound was widely gaping, the edges were infected and partly digested by the pancreatic fluid. On this day the abdomen was opened through the left rectus muscle. Crile's anoci-association technique was employed locally. The anæsthetic was ether, and was given in very small quantity. The duodeno-jejunal flexure was identified, and a loop about 8 inches from this drawn out of the wound. The afferent and efferent limbs at the base of this loop were made to communicate by a lateral anastomosis. A rubber catheter was sutured into the efferent limb of the loop according to the technique of Witzel for gastrostomy. The bend of the loop was then sutured to the parietal peritoneum and the wound was closed. On the table 10 ounces of peptonised milk containing a raw egg were poured into the intestine through the catheter. The operation was followed by no shock. Feeding through the jejunostomy opening was performed regularly, and food was also given by mouth. The condition of the patient improved rapidly and the fluid coming from the fistula was rapidly diminished in quantity, so that in ten days' time there was no bile staining to be seen. Next day the jejunostomy tube was removed. No leakage ever took place from the jejunostomy wound. The subsequent course to recovery was interrupted by the development of a parotid abscess which had to be opened twice, but otherwise progress was satisfactory, and the patient left the hospital on March 26th cured.

The problem of the treatment of a duodenal fistula is not a simple one owing to the very slight tendency manifested to spontaneous healing. This is largely due to the fact that in a duodenal fistula practically all the ingested food in addition to the gastric, pancreatic, and biliary secretions escapes. The result is a condition of starvation and consequent grave interference with the reparative powers of the body. Whether the loss of the duodenal secretions themselves plays a part in causing death is open to question. It appears strange that, as in the case here recorded, so much bile should escape from a comparatively small aperture situated at some distance above the opening of the common bile-duct. It would appear as though there were some hindrance to the onward passage of the duodenal contents beyond the opening of the common bile-duct. Ochsner[9] has described a sphincter muscle in this region, and such a muscle contracting would cause the necessary obstruction. It is true that Boothby[10] has denied the anatomical existence of such a muscle, but it seems probable that there is a physiological contraction in this region, for Cannon and Blake[11] have noticed segmentation of the contents of the duodenum after a bismuth feed, and state that food is delayed in the duodenum by circular contractions of the muscular coat. We know, too, that after pylorectomy circular constrictions of the duodenal wall have been proved to take place and to some extent vicariously perform the function of the pylorus. It seems, indeed, that chyme passing through the pylorus is retained in the duodenum before being passed onward into the jejunum until it has been intimately mixed with the duodenal fluids. In such facts may lie the explanation of the profuse loss of bile-stained fluid from a duodenal fistula.

Interest in the treatment of duodenal fistula was first aroused by Berg,[12] who suggested that the correct line to adopt should be gastro-jejunostomy combined with occlusion of the pylorus. This has been accepted by surgeons as the proper procedure. The number of successful cases, however, as stated above, is small. Berg's first case, which occurred after a cholecystenterostomy, was a success, although the patient died from the exhaustion, associated with carcinoma of the pancreas, 17 days later. The discharge from the fistula had ceased. His second case illustrates the futility of suturing the opening in the duodenum to check the outflow of its contents. In this case a fistula occurred seven days after the suture of a perforation. Immediately a posterior gastro-jejunostomy was performed and the ulcer was resutured. Two days later leakage occurred again. Another attempt was made to close the opening in the duodenum when finally the pylorus was occluded, but the patient died next day.

Souttar's case is interesting in that the fistula resulted from the perforation of an ulcer of the duodenum following an extensive burn in a child. Bile and pancreatic juice escaped for nine days. The abdomen was explored, the ulcer found and sutured, posterior gastro-jejunostomy performed, and finally the pylorus infolded. The child recovered. In Knaggs's case gastro-jejunostomy with infolding of the pylorus was successful.

Berg's treatment has the advantage that the gastro-jejunostomy may lead to the permanent healing of an ulcer that would otherwise remain open. It has the disadvantages that an infected area of the abdomen has to be opened up, and that much difficulty may be met with in gaining access to the pylorus through the numerous adhesions. When the pylorus is occluded the amount of bile and pancreatic juice poured into the duodenum is lessened because of the loss of the stimulus of the acid chyme coming through this opening. The consequent diminution in the quantity of fluid discharged from the fistula would at first sight appear to act very advantageously for the closing of the fistula. But a moment's reflection will show that the closing of a fistula, if there is no obstruction to the outlet of the viscus into which the fistula leads, depends scarcely at all upon the amount of escape from the opening. A suprapubic fistula closes when there is no urethral obstruction; a gall-bladder closes when the common duct is open. Failure to close, even when there is no obstruction, however, occurs when the fistulous tract becomes lined with epithelium continuous with that of the surface of the body, or when infection of the wall of the tract cannot be overcome. The closure of a fistula actually depends upon reparative changes in its wall, whereby scar tissue is produced with its tendency to contract and obliterate the channel. The longer the tract is the greater the chance of closure. The duodenum lies high up under the liver, so that the path to the surface is long. In addition the contents of the duodenum contain but few organisms. The tendency to healing would thus seem to be theoretically great. But there are two unfavourable influences: first, the digestive power of the pancreatic juice; and, secondly, the enormous interference with nutrition. If the resources of the body be maintained at as high a level as possible by introducing food into the bowel beyond the duodenum, reparative activity is stimulated and the antitryptic and bacterial defensive powers of the serum are increased. For these reasons the plan adopted in the case here reported seemed to be sufficient. It has the advantages, too, that it is technically a much simpler operation, because there are few or no adhesions to be dealt with; a septic area of the abdomen has not to be opened up; the normal functioning of the pancreas is not interfered with by hindering the formation of the hormone of the pancreas (secretin), which

occluding the pylorus does. The disadvantage lies in the fact that a subsequent gastro-jejunostomy, should it become necessary, would be a very difficult and complicated procedure. Nevertheless, I think that this operation will become the method of choice, and Mayo has found that very few perforated duodenal ulcers subsequently need a gastro-jejunostomy.

Bibliography.—1. E. M. Corner: Proceedings of the Royal Society of Medicine, vol. vi., p. 5, March, 1913. 2. E. M. Corner: THE LANCET, Jan. 10th, 1914, p. 101. 3. J. W. Struthers: Edinburgh Medical Journal, 1912, new series, vol. ix., p. 505. 4. W. S. Dickie: THE LANCET, Jan. 31st, 1914, p. 355. 5. A. A. Berg: Annals of Surgery, 1907, vol. xlv., p. 721. 6. Collective Report on Perforated Duodenal Ulcer, Edinburgh Medical Journal, November, 1913. 7. L. Knaggs: THE LANCET, Oct. 16th, 1909, p. 1142. 8. McDonald: West London Medical Journal, 1913, vol. xviii., p. 133. 9. A. J. Ochsner: Transactions of the American Surgical Association, 1905, vol. xxiii., p. 314; also American Journal of the Medical Sciences, 1906, vol. cxxxii., p. 1. 10. Boothby: Boston Medical and Surgical Journal, 1907, vol. clvii., p. 80. 11. Cannon and Blake: Annals of Surgery, 1906, vol. xli., p. 686. 12. Berg: Centralblatt für Chirurgie, 1903, 556.

Devonshire-place, W.

TRAUMATIC DISLOCATION OF THE HIP-JOINT

OCCURRING IN A BOY 10 YEARS OLD.

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DISLOCATION of the hip-joint of traumatic origin is a very uncommon condition in children. The kind of violence that in the adult produces dislocation must be supposed to produce in children, very much more commonly, separated epiphysis or fracture. As I cannot hear of any such case or find an account of any in the literature,[1] I think the following is worthy of record.

The patient, a boy aged 9 years 9 months, was admitted to the Adelaide Children's Hospital on Jan. 4th, 1914. The history of the accident was as follows. He was sitting on a moving truck filled with clay in a brickyard. He was struck on the left hand by a stone thrown by another boy. He turned and fell off the truck, a height of about 5 feet, and, as he asserts, "turned two somersaults before he hit the ground." The truck, which weighed, according to the father, some 5 cwt., came in contact with the upper and outer part of the boy's left thigh below the great trochanter as he fell. "The truck went half over him." In the boy's fall the first part to strike the ground was the upper and outer portion of the left thigh. He was unable to rise, and his "left leg felt as though it had gone to sleep."

It is thus by no means clear what the exact mechanism of the production of this injury was in the present case. The account given by the boy is vague, and it has varied from time to time. But as far as a connected statement can be obtained from him there seems no reason why a separated epiphysis or a fracture should not have occurred in this as in most other cases. That is to say, no explanation of the dislocation is afforded.

On admission to hospital the left thigh was found to be flexed at the hip-joint to about 45° with the horizontal, and was adducted and rotated inwards. The great trochanter was from an inch to 1½ inches above Nélaton's line. The head of the femur could be felt on the dorsum ilii. The joint was rigid. There was no crepitus along the course of the femur or in the pelvis. Except for an abrasion some 6 inches by half an inch crossing the lumbar spine obliquely, no other injury, external or internal, could be discovered. The case was regarded as a typical dislocation on to the dorsum ilii. But a careful watch for visceral injury was maintained for 12 hours after reduction. Under chloroform anæsthesia induced by Dr. W. T. Simmons, the house physician, the dislocation was reduced without difficulty. Nothing more was necessary in the way of manipulation than weak traction in the line of the misplaced femur, followed by slight increase (about 10 degrees) of flexion. The ease with which reduction occurred was no doubt due to (1) the weak musculature of the young child, (2) the fact that the dislocation was only about three and a quarter hours old, or perhaps also (3) extensive injury to the capsule of the joint.

A radiograph was taken in order to exclude the possibility of further bone injury, such as separation of the epiphysis or injury to the acetabulum. This showed that no such other injury had occurred.

In the after-treatment passive movement was begun on the seventeenth day (rotation, abduction, and adduction), but flexion through more than 5° was delayed until a week later, when active movement was also commenced. The patient was allowed to put weight on the limb on the twenty-eighth day. The result was apparently perfect on the patient's discharge from hospital.

Adelaide, South Australia.

[1] The only other at all similar case that I have been able to find in medical literature is that recorded by the late Mr. Walter Rivington (THE LANCET, 1878, vol. ii., p. 321). But in that case the condition occurred in a considerably older child—a girl aged 14 years. "Under ether it reduced itself." The case of reduction was thus a comparable experience to that in the present case. I should add, however, that I have not been able to search the literature at all thoroughly.

Medical Societies.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Exhibition of Specimens.—Enlarged Gall-bladder.—Shockless Surgery.

A MEETING of this section was held on March 20th, Dr. R. D. PUREFOY, the President, being in the chair.

Mr. A. BLAYNEY showed a specimen of Cancer of the Gall Bladder from a woman aged 42, who since last Christmas had suffered from distension and pain in the epigastrium and to the right side, with anorexia and occasional vomiting. Examination revealed a tumour in the region of the gall-bladder. On operation it was found that the fundus of the gall-bladder presented a distinct tumour, somewhat nodular on the surface, and involving the liver. The gall-bladder was removed with the object of diminishing the pain. Some gall-stones were found, as is usual in cases of carcinoma. The patient had done well and the pain was relieved.

Mr. S. PRINGLE showed an Ulcer excised from Hour-glass Stomach in a woman who had been sent to hospital with a provisional diagnosis of gastric ulcer. There was a history of symptoms extending over several years. For three weeks preceding admission she complained of very great pain, not regularly after food, but persisting all the time; vomiting was frequent, and for four days before admission almost constant. There was tenderness in the epigastrium to the left of the middle line. On opening the abdomen a very tight hour-glass constriction was found in the middle third of the stomach, immediately above which there was a hard mass adherent to the pancreas. The stomach was divided between two clamps, and on lifting it up the ulcer was detached from the anterior surface of the pancreas. After the ulcer was passed another clamp was put on the stomach, and an end-to-end suture of the two halves of the stomach was done. A drain was put in, which was removed after two

days, and the patient made an uninterrupted recovery.—Mr. BLAYNEY thought no operation but the one performed by Mr. Pringle would give a good result.—Mr. W. I. DE COURCEY WHEELER said that every case of this kind would suggest its own treatment. He had experience of three such cases, and in each of them he decided to do a different operation. One was stricture of the pylorus, and in this case it was easy to anastomose; in the second case it was found easier to do a Finney's operation; and in the third the stomach was resected, and an end-to-end anastomosis was done. In each case the patient did well.—Mr. H. STOKES said he had seen two cases in which a gastro-enterostomy had previously been done to the lower pouch. The patients were not improved, and on reopening the abdomen it was found that the anastomosis had been done to the lower end of the stomach. In both cases another gastro-enterostomy had to be performed.

Mr. R. ATKINSON STONEY described a case of Enlarged Gall-bladder with unusual signs. A woman, aged 37, was admitted complaining of a painless lump in the abdomen, which she had noticed for about a year, and which had been increasing in size. On examination there was a lump of about the size of a lemon in the right abdomen, which could be pushed nearly entirely under the ribs and down to the umbilicus; there was very little lateral movement. It seemed immediately under the anterior abdominal wall. Bimanually it slipped up under the ribs with the sensation of a movable kidney, but did not entirely disappear. An incision was made in the loin and a movable kidney found, and a nephropexy was performed. When dressing the case a fortnight later the tumour was again found, if anything larger than before. An abdominal incision was made and a greatly distended gall-bladder found adherent to the inner surface of a well-developed Riedel's lobe. A large round stone was felt impacted in the cystic duct. The gall-bladder was removed and the patient left hospital three weeks later. The gall-bladder was full of opalescent mucoid fluid, and a second stone was found loose, about the same size as the impacted stone, and with a facet on either end, each of which fitted exactly the facet on the other stone. The physical signs were explained by the presence of the two conditions.—Mr. PRINGLE said this case was another example of the difficulty of diagnosis of these tumours, and pointed out that mistakes were very likely to be made. In such a case he would have performed cholecystectomy, whereby the whole organ could be completely taken away without the risk of infecting the peritoneum.—Mr. BLAYNEY said he had at present under his charge a patient presenting all the signs enumerated in this case—namely, movable kidney and distended gall-bladder. She was aged 30, and had been treated for duodenal ulcer. He made a diagnosis of tumour in the gall-bladder. The anterior surface of the tumour came close to the abdominal wall and to the umbilicus, which was a condition not met with in movable kidney.—Mr. D. KENNEDY recalled a specimen, shown by him five years ago, of gall-bladder filled with calculi down as far as the pelvis, and said it was only when an incision was made down on the gall-bladder he found it had reached into the peritoneum. He considered it difficult in some cases to distinguish between tumour of the kidney and tumour of the gall-bladder. In cases where the gall-bladder was removed at operation difficulty was experienced in draining the bile-ducts.—Mr. STOKES mentioned that although these tumours of the gall-bladder might not be malignant, papillomata were usually met with, and it was often very hard to decide whether they were malignant or not.

Mr. WHEELER read a paper illustrated with lantern slides on Crile's Method of Shockless Surgery (Anoci-association).[1] He reviewed his own experiences for the past few months, and while admitting that the theory and practice were not ideal at present, a remarkable advance had been made towards the prevention, either transient or permanent, of ill effects from operations. In many cases after prolonged major operations the patients had little or no sensation of pain, there was no reactionary rise of temperature, no quickening of the pulse, and no manifestation of shock, great or small. It was likely that Crile's discoveries would mark a new era in surgery, and that a development of the principle of anoci-association would be as definite a milestone in surgical progress as the control of hæmorrhage in the days of John Hunter and the triumph of asepsis through the efforts of Lister.

[1] THE LANCET, July 5th, 1913, p. 7.

Mr. Wheeler stated that for ten years he had used novocain in conjunction with general anæsthesia, and for the past two years had, in addition, administered omnopon and scopolamine prior to operation. For the last few months he had been converted by the work of Crile and the advocacy of Moynihan to a very systematic infiltration of the tissues and to the employment of urea and quinine.—Mr. STONEY said he had no practical experience of the subject, but while anoci-association was very sound in theory he considered in practice it was slightly different. The operations which he found associated with shock, and where shock was sometimes fatal, were cases of emergency abdominal operation, especially those of strangulation or obstruction, and in such cases he did not see how anoci-association could be carried out, as one of the reasons for the shock was the handling of the intestines, and he suggested that unless one infiltrated the whole of the root of the mesentery a great deal of the shock could not be done away with. This procedure he held to be impracticable in such a case on account of the time necessary to carry it out. In extensive amputations or removals of large tumours one might be able to improve the patient's chances by adopting anoci-association, but for general operative treatment, or where the number of operations to be performed on the same day was large, it was not practicable.—Mr. WHEELER, in replying, said he was aware that one could, of course, get on tolerably well without this procedure, but so much did the patients think about the operation that they often afterwards dated every occurrence from the time of operation. He held that a slight rise of temperature was due to shock. Crile's idea was to have no shock. He agreed as regards the cases of intestinal obstruction. The faster and less complicated the operation in these cases the better would be the result. He agreed that excitement was caused by omnopon if the patient was wakened up. Moreover, it was hard to give ether after omnopon, as the patient breathed very slowly. Urea and quinine did not cause necrosis of the tissues. Local anæsthesia without general anæsthesia was not anoci-association at all. In reply to the President, he was of opinion that strychnine was bad to administer in any case of shock, although he recognised that there was much diversity of opinion in the matter.

SECTION OF MEDICINE.

Carbolic Acid Poisoning.—Incontinence of Urine in Nervous Diseases.

A MEETING of this section was held on March 27th, Dr. J. F. O'CARROLL, the President, being in the chair.

Dr. WALTER G. SMITH (the President of the Academy) related the case of a woman, aged 34, seven months pregnant, who accidentally swallowed about a teaspoonful of liquid carbolic acid. She quickly lost consciousness, and was brought to hospital in a comatose state. After some hours, under appropriate treatment, she recovered consciousness, and made a good recovery. The urine, drawn off by catheter about two hours after taking the poison, was dark yellow, and after a while darkened to a cairngorm brown colour. Some of the vomited stuff was distilled off H_2SO_4, and the clear distillate gave evidence of presence of phenol by the following tests, which were shown: (*a*) Fe_2Cl_6; (*b*) precipitate with bromine water; (*c*) red with Millon's reagent; and (*d*) blue with NH_3 and Br (indophenol). Reference was made to the excretion of phenol, which is, mainly, as paired (conjugated) compounds of glycuronic and sulphuric acids, and partly as di-hydric phenols (hydrochinon and pyrocatechin). The colour changes are due to unknown products arising from oxidation of these substances. The slight reducing power sometimes observed in carboluria is due to the glycuronic acid compounds. Glycuronic acid is a carbohydrate derivative. The excretion of phenol as phenyl-sulphates which are relatively innocuous has two consequences—(*a*) utility of freely administering sodium sulphate so as to favour formation of phenyl-sulphate; (*b*) diminished precipitate upon adding $BaCl_2$ to the urine because the SO_4 is locked up in the complex ion, phenyl-sulphuric, whose Ba salt is soluble.—The PRESIDENT complimented Dr. Smith on his interesting paper, and said most of the senior Fellows present had seen black urine during their student days in people who had been plentifully treated with carbolic acid. He had seen it following treatment with pyrogallic ointment.—Dr. R. TRAVERS SMITH inquired what would be considered a

safe intravenous dose of phenol. He remembered some cases of tetanus that had been treated by the President by intravenous injection of phenol, and he was anxious to know in bad cases where the treatment might require to be pressed to what point it might be safely done.—In connexion with Dr. Travers Smith's remarks, the PRESIDENT said he did not think the dose was given intravenously, and as well as he remembered the strength of the solution was 1 in 200 c.c. given twice daily into the tissues.—Dr. T. P. C. KIRKPATRICK said he would like to know if, as long as the ordinary sulphates were present in the urine, the patient was unlikely to suffer from carbolic acid poisoning. He also inquired as to the utility of alcohol in these cases of carbolic acid poisoning.—Dr. W. BOXWELL also spoke of the utility of alcohol in cases of carbolic acid poisoning, and said he had experience of a number of cases treated in this way at the Meath Hospital.—Dr. G. E. NESBITT corroborated Dr. Travers Smith's testimony as to the utility of phenol in cases of tetanus administered subcutaneously.—Dr. W. G. SMITH, replying, said he was much interested in the subject of carbolic acid being given in large doses, and pointed out that it would be impossible to inject anything in the way of strong carbolic acid into the veins without injury. Referring to Dr. Kirkpatrick's remarks regarding sulphates, he said if the case was a slight one, and it was found that the urine gave no reaction with chloride of barium, it showed that the sulphate was locked up by the carbolic acid. It would do a patient no harm to give an extra dose of sulphate of sodium. He agreed that alcohol was a valuable remedy, and thought that the best thing to do would be to wash out the stomach with alcohol.

Dr. BOXWELL read a paper on Incontinence of Urine in Nervous Diseases. He contended that the sharp distinction between the so-called "active" and "passive" incontinence did not exist either in the forms or under the circumstances usually set forth in medical text-books. This he thought particularly evident in the behaviour of the bladder in cases of myelitis at different levels in the cord. He thought that the statement of the *modus operandi* of this organ, and the theory invented to explain it, were both open to question. The existence of any "bladder centre" in the cord was extremely doubtful, and as to the conducting tracts controlling such a centre there was nothing whatever known about them. Dr. Boxwell favoured the view propounded by Müller, that the real centre was in the hypogastric plexus. He thought that micturition was a compound process, involving a true peripheral neural reflex for evacuation of the bladder over which we had no control, and accessory coördinate reflex acts of the abdominal and perineal muscles over which we had control, and which supplemented the act of evacuation, allowing of its consummation in a neat and satisfactory manner. In support of the view that the true centre was in the pelvic plexus Dr. Boxwell adduced (1) the acknowledged existence of the peripheral peristaltic reflex—for which no centre in the cord was claimed; (2) that recent embryological research pointed strongly to a common developmental origin for the bladder, rectum, colon, cæcum, and lower ileum, and it was, therefore, reasonable to suppose that they should all have a similar nervous mechanism; (3) that the existence of very large numbers of nerve cells in the pelvic plexus made the existence of such a peripheral reflex possible. For the anatomical observations in support of this view Dr. Boxwell was indebted to Professor A. F. Dixon.—The paper was discussed by the PRESIDENT, Dr. W. G. SMITH, Dr. PURSER, and Dr. TRAVERS SMITH.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.—A meeting of this society was held on April 2nd at the Great Northern Central Hospital, Dr. T. Wilson Parry, the President, being in the chair.—Dr. H. C. G. Semon showed a case of Hydroa in a boy aged 8½ years. The eruption, which was limited to the face, ears, and backs of the hands—namely, those parts of the body exposed to light—had been present for a year and had been equally troublesome both in the summer and winter, thus differing from the type of case described by Hutchinson under the name of summer prurigo. The condition had not been improved by any of the remedies recommended in the literature, but inasmuch as these cases almost invariably recovered of themselves towards puberty the prognosis was good.—Dr. C. M. Hinds Howell showed a youth suffering from Juvenile Tabes, who came under observation for a broken leg in November last. The fracture was quite painless and united firmly. The symptoms presented were fixed pupils, some slight atrophy of the thenar muscles, particularly on the right side. In the lower extremities there was general muscular hypotonia with double pes cavus, marked loss of deep and common sensibility in both legs, with absence of deep reflexes. The Wassermann reaction was positive.—Dr. Harry Campbell showed a woman, aged 26, in whom all the Subcutaneous Fatty Tissue had disappeared above the level of the pelvis. The atrophic process began in the face at the age of 6, and had since steadily spread downwards. Over the affected area the skin was unusually greasy, suggesting that the disappearance of the fat might be due to excessive activity of the sebaceous glands.—Mr. G. B. Mower White showed a man, aged 62, with Double Femoral Hernia, in whom another hernia, a left inguinal, had supervened. Reference was made to 831 cases of femoral hernia collected by Berger, 506 of which were simple (335 on the right side and 171 on the left), 215 bilateral, and the remainder, 110, were associated with other hernias.—Dr. Dan McKenzie showed a patient whose larynx had been removed for epithelioma 15 months previously. The expectation of life in such cases did not naturally amount to much, as the cancer was advanced before such an operation was undertaken. In early cancer of the larynx, on the other hand, the prospects after thyrotomy were as favourable as those of cancer of the lip after removal.—Mr. Cecil Rowntree showed a specimen of Carcinoma of the Rectum, which was remarkable for the presence of a large number of polypoid adenomatous tumours varying in size from that of a pea to a walnut. On microscopic section several of the polypoid tumours showed carcinomatous changes. The rectum had been removed by the late Mr. Cecil Leaf by the combined abdomino-perineal operation; the patient recovered well and returned to work, but ultimately developed recurrence and died two years after operation.—Dr. P. R. Ingram showed a Plated Fracture of the Femur, which broke three months after the plating operation owing to a sudden strain. The patient ultimately made a good recovery with extension treatment; the broken plate was not removed. It was evident that plating sufficiently accurate to produce complete immobility of the broken ends delayed union. It was better in these cases to give extra time and care in the after-treatment.—The President showed a specimen of fistulous opening between the sigmoid flexure and the bladder. The specimen was removed by Mr. Mower White from a man, aged 65, who, after suffering for many years from constipation, had an acute attack 2½ years ago, with pain, tenderness, and a swelling nearly the size of the closed fist in the left iliac region a little to the left of the middle line. The patient refused medical aid, and the illness dragged on for a considerable time. On Nov. 16th last the temperature, which had never been normal, began to run a septic course. The urine gave a marked cloud of albumin, pus cells were plentiful, and there were a few hyaline and granular casts. On cultivation the bacillus coli communis was grown in abundance. A vaccine prepared by Mr. Ernest Shaw was injected once a week from Nov. 19th. The bladder was washed out daily. On Feb. 18th fæces and gas were passed with the urine. This occurred for nearly six weeks, when an operation was performed. Mr. Mower White separated the bladder from the sigmoid flexure, stitched up the opening in the bladder, and removed a large inflammatory mass from the sigmoid, bringing the two ends of the bowel together and uniting them. The patient was making an excellent recovery.—Mr. Ernest H. Shaw showed several specimens of Diverticula of the Sigmoid Flexure and made a few remarks on the pathology of this condition. They occurred in persons usually at middle age and later, usually in obese individuals and most commonly in men. The common situation for these pouches was the sigmoid, but they also occurred in other parts of the large bowel, including the vermiform appendix—rarely found in the rectum and small intestine. In the sigmoid there might be a few or they might be present in large numbers. He showed a sigmoid flexure containing 75 of these pouches.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on April 3rd, Dr. David Ross, the President, being in the chair.—Dr. Philip Hamill read a paper on the Clinical Aspects and Treatment of Disordered Action of the

Heart, in the course of which he said that some 10–15 per cent. of all adult patients on the medical side complain of symptoms referable or referred by them to the heart. One of the commonest symptoms is palpitation, or a consciousness of the heart beat with associated discomfort. This symptom is most marked in patients in whom there is flatulent distension of the stomach; it is frequently associated with disturbances of the cardiac rhythm. The cardiac discomfort experienced by athletes and those engaged in laborious occupations, who have been attacked by some febrile illness, is characterised by slow return of the pulse-rate to normal after exertion and by the occurrence of premature contractions. Great slowing of the rate of the heart, apart from jaundice, is not infrequently seen. It is natural to some individuals, especially athletes; it also occurs in convalescence from certain fevers and in the condition known as complete heart-block in which the communicating path between auricles and ventricles is divided as the result of disease; the ventricular rate is then usually about 30, whilst the auricular rate is normal. The distinction between slowing of the whole heart and complete heart-block is of clinical importance, for the latter condition indicates a much damaged myocardium. Apart from instrumental methods and those cases in which the auricles can be heard to beat with a different rhythm, the two groups can be distinguished by the effects of excitement and exercise, which in heart-block leave the ventricular rate unaltered. Extreme rapidity of the heart's action is also met with, especially in Graves's disease and paroxysmal tachycardia, though some individuals, apparently normal otherwise, may have a pulse-rate as high as 300 per minute. In auricular fibrillation the pulse-rate is sometimes very high. Irregularity of the heart beat may arise from various causes. 1. The whole heart may beat normally, but with an irregular rhythm. This condition is common in children and has no clinical significance. It is well exemplified in dogs. 2. Certain beats arising at the sinus may cause contraction of the auricle, but the wave may fail to reach the ventricle. This condition of partial heart-block is not uncommon in fevers, especially rheumatic fever, pneumonia, and diphtheria, and indicates serious involvement of the musculature of the heart. It is important that it should be distinguished from the first variety, for it requires complete rest in bed. 3. Abnormal, premature beats may arise at foci other than the normal pacemaker and disturb the rhythm of the heart; they are followed by a compensatory pause. Such premature beats are usually feeble and may not eject sufficient blood to cause a pulse wave palpable at the wrist. Premature beats are often associated with a peculiar sensation of void followed by a thumping in the chest and feeling of sinking. They occur occasionally in almost all normal individuals, particularly in those who smoke to excess. The pulse irregularity which they produce disappears on exertion sufficient to cause the rate to rise to about 120. By themselves they have probably no special significance, but in a heart already damaged by disease they probably indicate the presence of foci of irritation and thus aggravate the severity of the prognosis. They are best treated by reassuring the patient, removing the exciting cause, and by attending to dyspepsia and flatulence; bromides are very useful. 4. Paroxysmal tachycardia consists essentially of a series of premature beats arising in the auricle. The pulse-rate is usually over 140 per minute, and the condition is often readily distinguishable by the constancy of the pulse-rate regardless of posture. Attacks if prolonged may prove fatal from heart failure, but they usually terminate abruptly with great relief. Prolonged attacks may be associated with epigastric tenderness and rigidity, but may be distinguished from acute peritonitis by the constancy of the pulse-rate and enlargement of the liver. Treatment is unsatisfactory; some patients can terminate the paroxysm by pressure on the abdomen or by adopting some particular posture. Drugs are of little avail. Prognosis depends on the frequency and severity of the attacks and the presence of valvular lesions. 5. Auricular fibrillation is responsible for the "pulsus irregularis perpetuus." It is present in a very large proportion of failing hearts, and is usually permanent when once it sets in. The patient does not usually survive its onset by many years. Treatment is most successful in cases with a high pulse-rate. Digitalis is the most useful drug, and should be given in full doses until the desired effect is produced. In urgent cases intravenous injections of strophanthus work wonders. Care must be taken to stop the drug should coupled beats of the ventricle appear. 6. Pulsus alternans or alternate large and small beats usually need a pulse tracing for their recognition. They are of dire prognostic significance, for they indicate an exhausted myocardium.—A specimen of Atheroma of the Coronary Arteries from a patient who died suddenly was shown for Dr. A. F. S. Sladden.—Mr. J. J. Udale showed a Heart weighing 21 oz. from a man, aged 46, having a vertical patch of calcification.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held on April 4th at the West London Hospital, Dr. F. S. Palmer, the President, being in the chair.—The President showed a case of Wasting of the Muscles of the Shoulder-girdle of nine months' standing in a man. Fibrillary tremors excluded a myopathy, and suggestions as to the diagnosis were asked for. Syphilis was denied.—Dr. E. G. Fearnsides suggested the probability that the lesion was due to syphilis, and advised that a Wassermann reaction should be carried out.—Dr. J. M. Bernstein showed cases of Polycythæmia with splenic enlargement in husband, wife, and son; also a case of Myxœdema in a woman whose daughter was attending Dr. G. Pernet for Alopecia Areata. Both cases were controlled with the administration of thyroid extract.—Dr. Bernstein also showed a case of Splenic and Hepatic Enlargement in a sailor. The Wassermann reaction was positive, and Dr. Bernstein intended to show the patient at a subsequent meeting after treatment with salvarsan.—Dr. E. A. Saunders, Dr. D. N. Nabarro, Dr. S. Wyard, and Mr. H. Tyrrell Gray discussed these cases.—Dr. Pernet said that the daughter of the myxœdematous patient under Dr. Bernstein's care improved as regards the alopecia with the administration of thyroid extract, but relapsed when this drug was discontinued.—Dr. L. C. T. Dobson (for Mr. Donald Armour) showed a case of Syphilitic Disease of the Cervical Vertebræ in a man; also a case of Enlarged Liver and Spleen in a boy whose Wassermann reaction was positive. Salvarsan was given a week ago, and, though the splenic and hepatic enlargement had not altered, the temperature was now normal, and the general condition had greatly improved. Dr. Dobson also showed (for Mr. Armour) a case of Complete Excision of the Tongue, with intelligible speech, and a case of Multiple Gummata of the Tongue.—The notes were read of a case of Cruroscrotal Hernia under the care of Mr. W. McAdam Eccles.—Dr. H. J. Davis showed a case of Chronic Œdema of the Eyes and Nose with pus in the antrum.—Dr. Saunders showed a case of Congenital Syphilis with Recurrent Periostitis of both Tibiæ and Ulcerating Gumma of the Palate.—Dr. Pernet showed a case of Double Primary Chancre of the Lips and a typical secondary rash. There was no lesion of the external genitalia. Dr. Pernet also showed a case of Angioma Serpiginosum.—Mr. N. Bishop Harman showed a Horn of the Lower Eyelid; some Types of Hair; a case of Coloboma of the Iris; and a case of Embolism of the Central Artery of the Retina in a man in whom no primary lesion could be discovered.—Dr. T. Grainger Stewart showed a case of Toxic Polyneuritis and a case of Hysterical Paralysis. The cases were discussed by Mr. H. S. Souttar.—Mr. Tyrrell Gray and Dr. Nabarro showed a Sarcoma in a Keloid of the Eyebrow (exhibited at a previous meeting) cured with one application of radium. Dr. Nabarro showed sections of the tumour which proved the growth to be a small round-celled sarcoma.—Mr. Souttar showed the following cases of nerve injury: 1. Paralysis of the Deltoid from direct injury. 2. Injury of the Posterior Interosseous Nerve, with recovery after operation. 3. Injury to the Posterior Cord of the Brachial Plexus, the result of dislocation. 4. Paralysis of the Fifth and Sixth Cervical Nerves in a child, the result of anterior poliomyelitis. 5. Paralysis of the Ulnar Nerve after injury, the paralysis remaining at present being probably functional.

ERRATUM.—On p. 1039 of THE LANCET of last week, on the twelfth line from the foot of the second column, occurs a clerical error in our account of the proceedings of the Medical Society of London. For "Mr. H. W. Carson spoke," read "Dr. J. G. Garson spoke."

Reviews and Notices of Books.

The Fæces of Children and Adults: their Examination and Diagnostic Significance, with Indications for Treatment.

By P. J. CAMMIDGE, M.D. Lond. London: Simpkin, Marshall, Hamilton, Kent, and Co.; Bristol: John Wright and Sons. 1914. Pp. 516. Price 17*s.* 6*d.* net.

THAT much valuable information as to conditions prevalent in the alimentary canal might be obtained from examination of the fæces has long been evident, but though knowledge has so far come wisdom has lingered, in that no very satisfactory methods of study have been available, the bacterial flora in particular being so abundant as to render accurate differentiation of individual organisms a matter of the greatest difficulty. Even now we can claim little more than that a beginning has been made and some progress effected by the work of such observers as Herter, Hecht, Schmidt and Strasburger, and others, towards laying the foundations of a scientific study of this field.

Dr. Cammidge's book will be welcomed both as the production of one who is himself an authority on the subject and as giving a convenient epitome of the existing state of knowledge. The introduction deals with the method of collecting fæces for examination and with their general characters. The next two chapters are devoted to naked-eye and microscopical examination of normal and pathological stools, while the fourth treats of animal parasites and pseudo-parasites, a useful plate being given showing the commoner objects which may counterfeit parasites, such as cotton threads and débris from various vegetables. Chapter V. deals with bacteriological examination and with the classification of the organisms present in the fæces, more information being apparently obtainable from a general study of the type of bacteria present in any case than from a detailed investigation of the individual species. The Gram method of staining, for example, affords a useful means of dividing the mass of germs into two categories and of obtaining a general idea of the most prevalent varieties. The fæces of breast-fed and bottle-fed babies show a sharp differentiation by this method. Some good coloured plates are employed to illustrate this section. Chapters VI. and VII. contain an account of the chemical analysis of the fæces, in the moist and in the dry condition respectively, and Chapter VIII. treats of the various calculi which may be passed. It is interesting to note that if a very digestible diet is given the fæces passed consist almost entirely of bacteria and matters derived from the intestinal walls. From a medical point of view, perhaps, the two concluding chapters are the most interesting, as they deal with the diagnostic value of examination of the fæces and with the indications for treatment derived from them. It would seem that a complete alteration of diet may be followed by almost as complete a change in the flora of the intestine, and that useful therapeutic measures may in time be devised and controlled on such a basis.

Schemes of dietary are given in an appendix to this book, which is also furnished with a full index and with bibliographies to the separate chapters. There are many illustrations throughout besides those which we have already mentioned, and the print and paper are excellent. We commend the book to all who are interested in the scientific side of our profession as a stimulating contribution to a comparatively little-known province of physiology and medicine.

La Lèpre à Travers les Siècles et les Contrées.

Par le Dr. DEMETRIUS AL. ZAMBACO PACHA (de Byzance). Paris: Masson et Cie. 1914 Pp. 864. Price 12 francs.

LEPROSY, according to modern research, is a disease which goes back to prehistoric times and one which has everywhere excited fear, repulsion, and, to the credit of Christianity be it said, sympathy. Dr. Zambaco Pacha, who devoted most of his life to the study of leprosy and who died just as the work now before us was being prepared for press, has produced a most interesting book even if it be one which, like many a work written by an enthusiast, contains statements for which there is insufficient evidence. Had he lived to see a second edition there is little doubt but that he would have modified some of these.

His thesis is that leprosy originated somewhere in Central Asia, probably Northern India. Thence it spread to Egypt, where the Jews contracted it; but the main agents of its transmission throughout the world were the Phœnicians, who were without doubt daring and intrepid navigators. So far we can agree with Dr. Zambaco, especially as Hippocrates calls the "leuke," or white leprosy, the "Phœnician disease." But when in his eagerness to prove his thesis he argues that the Argonauts were all infected with leprosy which they and their ancestors had received from the Phœnicians we are fain to call a halt, for the statement is made without the slightest evidence to support it, unless, indeed, we allow that because leprosy was known to exist in ancient times throughout the countries traditionally visited by the Argonauts, therefore the Argonauts had carried the infection. Dr. Zambaco quotes the account of the visit of the Argonauts to Lemnos, and their dealings with the Lemnian women. These women, he says, may easily have been infected by their lovers, and he then calls to mind the tradition that the Lemnian women were attacked with a form of ozæna. The tradition undoubtedly exists, but the ozæna was inflicted as a punishment by Aphrodite long before the arrival of the Argonauts.

To pass to historical times. Dr. Zambaco, to make a rhetorical point, says (p. 77), "Le christianisme et la lèpre firent ensemble leur entrée solennelle à Byzance." Then he quotes as a legend "borrowed in a small degree from history" the story of Constantine being a leper, a story which has long been exploded, while on p. 79 he allows that leprosy existed in the country before the installation of Constantine at Byzantium. The disease continued to be a scourge throughout the Eastern Empire, and in 372 A.D. the great St. Basil erected a lazar house, or rather town, outside the walls of Caesarea, a description of which has come down to us in the pages of Sozomen, and in the funeral oration on Basil delivered by St. Gregory Nazianzenus, who refers to the institution as follows: "Why should I compare with this work Thebes of the seven portals [then he mentions the remaining seven wonders] or the size and beauty of shrines which are no more. ..... There is no longer before our eyes that terrible and piteous spectacle of men who are living corpses, the greater part of whose limbs have mortified, driven away from their cities and homes and public places and

fountain, aye, and from their dearest ones, recognisable by their names rather than by their features ..... no longer the objects of hatred instead of pity, on account of their disease; composers of piteous songs, if any of them have their voice still left to them."[1] From this vivid picture we can form an idea of the lot of the leper before charity came to his aid, and even after an asylum was provided for him in some places many a leper had to "dwell without the camp," though the Church provided a form of putting away in which kindliness took the place of hatred. Dr. Zambaco (p. 123) gives the form in use in France, in the diocese of Troyes, about 1425. Those who care to study the Sarum Use will find it given in Appendix A of Miss Rotha Mary Clay's "Mediæval Hospitals of England."

Dr. Zambaco calls his book an anthology, and it is, in fact, rather a series of papers on various aspects of leprosy than a continuous work, such papers being arranged in a somewhat confused manner. Some of his theories, though plausible, will not meet with general acceptance; such, for instance, is his statement that Morvan's disease, syringomyelia, morphœa, and sclerodactyly are all forms of aborted or attenuated leprosy. He considers that leprosy is a bacillary disease, and that the specific bacillus is that discovered by Hansen, but he is also of opinion (p. 747) that leprosy with all the classical clinical symptoms can exist without the bacillus being discoverable, and he gives as a reference (p. 156) in support of this theory an admission by Hansen in Virchow's Archives for 1902. Much of the work is taken up with a survey of leprosy as it exists at present in nearly every country of the world, and these sections contain a mass of statements and statistics. Other sections deal with the bacteriology, the contagiousness, and the curability of leprosy. Dr. Zambaco does not hold with the contagiousness, and does consider the disease curable. There is no need to be afraid of leprosy, but lepers are best treated in agricultural colonies, where they can live under good hygienic conditions, and where wholesome work prevents them dwelling upon their unhappy condition.

In the concluding section of the book Dr. Zambaco reverts to his favourite Phœnicians, and in an illuminating essay upon the megalithic monuments of Brittany adduces an elaborate argument to show that the Phœnicians colonised what is now Brittany at a very early date; that they built the megalithic monuments the inscriptions on which are derived from various symbols which they had met with in African and Asiatic lands; and finally, that they introduced leprosy, the morbus Phœnicicus, into ancient Armorica, as they did into all the other lands they visited, where it exists more or less widely to-day.

Although Dr. Zambaco's views may be considered visionary here and there, yet none the less his work is of great interest and is evidently the result of the labours of a lifetime.

Localisations Cérébelleuses.

Par ANDRÉ-THOMAS et A. DURUPT. Paris: Vigot Frères. Pp. 197. Price 6 francs.

IN 1897 Dr. André-Thomas published an important memoir on the cerebellum. Along with A. Durupt during the last two years more work has been done in the laboratory of Professor Dejerine on cerebellar localisation, and the result is before us. The first part deals shortly with the history of cerebellar research, the comparative anatomy and physiology of the organs, including Bolk's nomenclature, as well as with the actual state of our knowledge on cerebellar localisation. In the second part the authors give an account of their own researches on the dog and monkey. Injuries of various portions of the cortex were made and the effects, immediate and remote, observed and studied. In all, the results on 11 dogs and four monkeys are given.

A special chapter is devoted to observations made on monkeys immobilised in various ways with a view to studying the action of various groups of muscles, according to the animal's position. In the third part the authors review these experiments and proceed to interpret their results. They conclude that there are centres in the cerebellar cortex which affect limited regions of the body. In the cerebellar cortex are represented the musculature of different parts of the body. The vermis contains the centres for the muscles of the head, neck, and trunk. Each hemisphere contains centres for the limbs of the same side, and there is a centre associated with the upper limb, and another and distinct centre for the movements of the lower limb. Each centre is made up of secondary centres in relation to the movements at each joint by means of a special coördination of muscles, e.g., extension, flexion, abduction, and so on—that is, they are *centres of direction*. A considerable number of photographs, both of dogs and monkeys, elucidate the text.

This brochure is a welcome contribution to our knowledge of the organ which lies astride the junction of the cord with the brain. The facts observed stand well in harmony with clinical observation as well as with the facts of pathology. Physiologists and clinicians alike will be glad to have this succinct *résumé* of the facts relating to cerebellar localisation.

Syphilis and the Nervous System.

By Dr. MAX NONNE, Chief of the Nervous Department of the General Hospital, Hamburg-Eppendorf. Authorised translation from the second revised and enlarged German edition by CHARLES R. BALL, B.A., M.D., Chief of the Nervous and Mental Department, St. Paul Free Dispensary, St. Paul, Minnesota. With 98 illustrations in the text. London and Philadelphia: J. B. Lippincott Company. 1913. Pp. 406. Price 18*s.* net.

Dr. Nonne's book on syphilis and the nervous system is already familiar to many neurologists, both in this country and in America. Its high merits have won it a permanent place in neurological literature. The present edition, in English, has on the one hand been rendered somewhat shorter than the German edition by the omission of a number of case histories; on the other, it is an improvement on the last German edition, inasmuch as Dr. Nonne has taken the opportunity herein provided of rewriting the original chapters on the so-called "four reactions," and he has added a chapter on salvarsan therapy. In this way the English edition has been brought up to date, an important matter when the rapid strides at present being made in syphilology are taken into account.

The volume under consideration supplies elaborate and detailed descriptions of both the clinical and the pathological sides of syphilis of the nervous system. Interstitial syphilis, in the form of syphilitic endarteritis, meningo-myelitis, meningitis, and cerebro-spinal syphilis, and parenchymatous syphilis—viz., tabes dorsalis and general

[1] Library of Nicene and post-Nicene Fathers, vol. vii.

paralysis—are fully discussed. There are chapters on syphilis of the peripheral nerves, hereditary syphilis, neuroses and psychoses in syphilitics, and syphilis of the base of the brain; indeed, there appears to be no section of the subject of which the author has not taken cognisance. The book has entailed a vast amount of clinical and pathological research, but it is well put together, and the important principles of the invasion of the nervous system by syphilis are not lost sight of in a multiplicity of detail.

Several statements of the original author are open to criticism. In view of the work of Marie, Léri, and others of the French school it is misleading to say that "there is nothing in the literature concerning syphilis as a causative factor of amyotrophic lateral sclerosis." Recent advances have made the statement obsolete that "general paresis is not a specific syphilitic disease of the brain." It is said that "with a loss of the light reaction on one side and an optic neuritis on the same side, one may safely diagnose the case as brain lues," but it would be unwise, in our opinion, to go so far as this.

The translation has been on the whole well done. The word spirochæte, however, is not always treated consistently. Thus "spirochæte" is apparently used as a plural. We note "autopsy" used as a verb and "residual" as a substantive. There is a reference to "retinitis albuminuria." There is also a curious and frequent tendency to insert the article "the" inaccurately, as in the following: "Uhthoff from his material found the homonymous hemianopsia 11 times." The reader finds himself pulled up by such sentences as "the changes resemble those found in the posterior column degenerations in humans." It is regrettable that references to the figures are frequently omitted in the text. There is no explanation of Figs. 56–59, which, by the way, are the same as Fig. 53. Figs. 84–90 are identical with Figs. 51 and 52, but the latter are not explained. There are many evidences of careless reading of the proofs, for instance, "thickening of the neurologia" occurs.

These and other criticisms that might be advanced are mentioned solely because the neurologist gladly admits the excellent qualities of the book now offered to a wider public, and it is a pity it should be disfigured by these minor blemishes, which we trust will disappear in subsequent editions.

Manual of Surgery.

By ALEXIS THOMSON, Professor of Surgery, University of Edinburgh; Surgeon, Edinburgh Royal Infirmary; and ALEXANDER MILES, Surgeon, Edinburgh Royal Infirmary. Vol. III., Operative Surgery. Second edition. With 255 illustrations. London, Edinburgh, and Glasgow: Henry Frowde and Hodder and Stoughton. 1913. Pp. 620. Price 10*s.* 6*d.* net.

THE third volume of this valuable manual of surgery deals only with the operations, and it contains all that is usually included in such works. We agree with the authors, that in spite of the fact that nowadays arteries are seldom ligated in their continuity, the tying of arteries provides an excellent means for the student to acquire practice in operative manipulations, and furnishes a ready means of testing his dexterity and his anatomical knowledge, and therefore we are glad to see that the authors have retained this section. The whole book has been written by surgeons who appreciate fully the needs of students and the real requirements of operative surgery. The volume is very fully illustrated and we cannot imagine a more useful treatise for the student. It is inevitable that in a work of this kind there should be much that might be discussed, but such discussions would be really out of place in a review of a work intended for students.

The Respiratory Function of the Blood.

By JOSEPH BARCROFT, M.A., B.Sc., F.R.S., Fellow of King's College, Cambridge. Cambridge: At the University Press. 1914. Pp. 320. Price 18*s.* net.

THE author tells us that "the purely personal point of view from which this volume has been written demands the treatment of the subjects in a personal way." It includes the story of the author's physiological "ventures," and any merits which attach to the narrative—and the merits are many and varied—lie in the fact that it is in some sense first-hand. That which the author has not actually touched he has refrained from discussing, so that such subjects as the relation of narcosis to oxygen-want and the properties of intracellular oxidative enzymes find no place in this volume. The author's desire was to call the book "what it frankly is—a log" (of course, in the nautical sense), but in the end "a less exact though more comprehensive title" was chosen.

The text is divided into three parts. Part I. deals with the chemistry of hæmoglobin (pp. 1–72); Part II., the passage of oxygen to and from the blood (pp. 73–217); Part III., the dissociation curve considered as an "indicator" of the "reaction" of the blood (pp. 218–289). The remainder of the text is taken up with appendices chiefly devoted to an account of methods.

The "specific oxygen capacity" of blood or hæmoglobin—i.e., the number of c.c. of loosely combined oxygen corresponding to each gramme of iron in the compound—is first dealt with. Hæmoglobin may differ in different species, but it is a unique compound, and the author suggests that "but for its existence man might never have attained any activity which the lobster does not possess, or had he done so, it would have been with a body as minute as the fly's." Blood carries about 40 times as much oxygen as the same volume of plasma. This we may remember, but anyone wishing to follow intelligently the author's narrative should make himself acquainted with the modern methods of gas analysis of the fluid of the body, where everything depends upon working with the minimum quantity of gas. A few drops of blood suffice, so accurate is the present technique. Next follows a discussion on the dissociative curve of hæmoglobin, the effects of temperature and electrolytes on the affinity of hæmoglobin for oxygen, and the effect of acid on the dissociation curve of blood. The effect of increased acidity is to lessen the effective concentration of the oxygen in the solution which contains the hæmoglobin.

Part II. begins "with the call for oxygen by the tissues"—i.e., what is called "internal respiration." It is the cell that primarily determines not only its own nutrition but also its respiratory wants. The author elaborates the theme that there is no instance in which it can be proved that an organ increases its activity under physiological conditions, without also increasing its demand for oxygen. This theme is elucidated by the results of gaseous exchanges in skeletal muscle, in which, as in

other organs, the increased oxygen consumption survives the increased functional activity. Similar results are obtained with the heart and its gaseous exchanges. The results obtained with adrenalin, pilocarpine, atropine, and chloroform are both striking and convincing. The author professes himself an enthusiast for the beautiful work of Rohde on this subject. After contractile organs, the best attested case of functional activity going hand-in-hand with oxygen consumption is the kidney. Then follows a review of similar work on the salivary gland, pancreas, and liver. However these organs are excited it is shown that in no organ excited by any form of stimulus is it found that positive work is done without the blood supply having to respond to a call for oxygen. The call for oxygen is then considered as a physiological test, and in this relation diuresis and the kidney are considered. As to the metabolism of the blood itself, an interesting observation of Morawitz is made much use of —viz., that the blood of anæmic animals has a very considerable metabolism, which is due to the fact that in such animals young unnucleated red corpuscles are present in large numbers. This matter is discussed in relation to an increased formation of red corpuscles at high altitudes.

A very interesting chapter is that on the regulation of the supply of oxygen to the tissues. It is remarkable to note that the oxygen used by the liver is unaffected if the portal vein be ligatured altogether and its blood diverted into the general circulation without passing through the liver. Are there local chemical products the result of metabolism—e.g., CO_2, lactic acid, which have the power of distending blood tissues? The answer is yes. The evidence is very carefully and judicially considered as regards the submaxillary gland, pancreas, and heart. Next the author deals with the unloading of oxygen from the blood, and the rate of exchange between the blood and the tissues. The two chapters on the acquisition of oxygen by the blood in the lungs are amongst the most interesting in the book. In them the author gives a masterly analysis of the diffusion and secretory theories as they apply to the gaseous exchanges in the lungs. The effect of diet and of high altitudes on the dissociation curve of blood, exercise, acidosis, and some cognate matters are then discussed.

Every physiologist will welcome most warmly this most interesting and largely personal narrative of a masterly series of observations. Many secrets still lie hidden in this mysterious and as yet but partially explored "internal medium," to use the apt phrase of Claud Bernard.

Genito-urinary Diagnosis and Therapy for Urologists and General Practitioners.

By Dr. ERNST PORTNER, Specialist for Urology, Berlin, Germany. Translated and edited by BRANSFORD LEWIS, M.D., B.Sc., Professor of Genito-urinary Surgery, Medical Department of St. Louis University, St. Louis. With 43 illustrations. London: Henry Kimpton; Glasgow: Alexander Stenhouse. 1913. Pp. 221. Price 10*s.* 6*d.* net.

THERE are many affections of the genito-urinary system met with in general practice the treatment of which is fully within the range of the modern general practitioner, but the subject requires more attention than is usually paid to it by the student. This small book has been written exactly with the aim of providing those in general practice with the help they need; it lays stress on the practical points of this department of surgery, and indicates the way of carrying out the necessary procedures. It does not go too deeply into matters which are outside the practical sphere of the general practitioner, who has not wards, laboratories, and operating theatres at his back, but the author is very complete within the limits which he has set himself. We are pleased to see that a special chapter has been provided containing an account of the affections of the female urethra; this is too often omitted in works on genito-urinary surgery. The translation is good. An appendix has been added on the serological diagnosis and specific treatment of gonococcal infections, which is interesting, but a little beyond the scope of the rest of the work.

LIBRARY TABLE.

Flying. By GUSTAV HAMEL and CHARLES C. TURNER. London: Longmans, Green, and Co. 1914. Pp. 341. Illustrated. Price 12*s.* 6*d.* net.—It is not necessary to be an aviator to recognise in M. Hamel's flying those characteristics, so difficult to describe, which are summed up in the phrase "a good style." There are an appearance of ease, an elegance, a happy sense of mastery about his management of an aeroplane, which are obvious to all beholders. Whether he or Mr. Turner is mainly responsible for the literary form of this joint work it is not essential to inquire very closely, but certainly there is a simplicity and directness about it such as few amateur writers can impart to their books. The style is not so arresting as that of M. Hamel's flying, but at least it is quite fairly good. The treatment is thoroughly practical throughout, and technicalities are either avoided or rendered intelligible to terrestrials. No attempt, in fact, is here made to write an advanced text-book for fliers; but a very readable and informing account, illustrated by a series of splendid photographs, is provided for those whose interest in the subject is mainly that of admiring spectators. The medical aspect of aviation is dealt with in a separate chapter by Mr. J. E. Adler, and here the essentially practical tone of the other chapters is very little in evidence. The greater part of the chapter consists of a *résumé* of the physiological (or pathological) effects of high altitude upon the human organism, expressed in scientific terms calculated to make the information quite unintelligible to the laity.

Handbook of Photomicrography. By H. LLOYD HIND, B.Sc., F.I.C., and W. BROUGH RANDLES, B.Sc. With 44 plates, 85 half-tone reproductions of photomicrographs, and 71 text illustrations. London: G. Routledge and Sons, Limited. 1913. Pp. xii., 292. Price 7*s.* 6*d.* net.—The authors in their prefatory note point out that this book is the outcome of a series of articles originally published in the *Photographic Monthly*, and intended as an introduction to photomicrography from a photographer's point of view. It is, in fact, a technical handbook which deals with all that is of practical value to those desirous of acquiring skill in photomicrography. The elements of the work are fully dealt with under the headings of photomicrographic apparatus, the microscope, lamp, and illuminants. There

is a chapter on the experiments of illumination, as regards both critical light and dark ground illumination, and another on the photographic methods applicable to low power work and high magnifications. There are special chapters on colour photography and the reproduction of opaque objects which are of special interest to the metallurgist, and a final chapter deals with the applications of photomicrography in medical practice and the various arts. Throughout there are numerous illustrations showing to what a stage of perfection photomicrography has reached. The medical reader will be especially interested in the beautiful plates of bacteria and protozoa as well as in the coloured reproductions of chromogenic bacteria. Here we note that the authors fall into a common error and talk about flagellæ. The illustrations include some fine kinematograph films of live organisms taken by Messrs. Pathé Frères. There is a useful appendix on histological methods and formulæ for staining and for the various photographic processes. We have merely outlined the scope of this work, but we can highly recommend it as a useful handbook of the technique of photomicrography.

Astrology in Medicine. The FitzPatrick lectures delivered before the Royal College of Physicians of London on Nov. 6th and 11th, 1913. With Addendum on Saints and Signs. By CHARLES ARTHUR MERCIER, Fellow of the College. London: Macmillan and Co., Limited. 1914. Pp. 100. Price 2*s.* net.—Dr. Mercier's lectures have already appeared in abstract in our columns, but their publication in book form will render them accessible to those members of the general public who are not likely to read a professional journal. He treats his subject in a somewhat Laboucherian vein, and we think that he might have made rather more of the historical and medical side of it. His words of warning on p. 75 are very sound, but the "Addendum," which we are glad to see was not delivered as a FitzPatrick lecture, is surely unworthy of the writer.

Lunacy Practice. By WILLIAM H. GATTIE, of Gray's Inn, Barrister-at-Law. Second edition. London: Shaw and Sons. 1914. Pp. 60. Price 2*s.* 6*d.* net.—Mr. Gattie issues the second edition of his "Practical Guide for the Certification and Detention of Persons of Unsound Mind" in a similar form to the first—that is to say, it consists of short notes or abstracts giving the essential parts of the Lunacy Acts so far as they govern certification and detention, accompanied by all necessary forms. The forms have the advantage of being filled up with imaginary names and details concerning imaginary patients, which renders them easier to follow than those which are given in blank. A chapter has been added dealing with summary reception orders. The print is large and easy to read, but smaller type and a smaller page might be found more convenient to handle, or, on occasions, to put in the pocket. Perhaps Mr. Gattie will consider the point in any subsequent issue.

Jahrbuch für Orthopaedische Chirurgie. By Dr. PAUL GLAESNER. Berlin: Julius Springer. Pp. 110. Price 6 marks.—A most useful little work of reference on recent orthopædics, giving full references to the literature in England, Germany, France, America, and other countries for 1912, with a brief abstract of the various works.

MISCELLANEOUS VOLUMES.

A BOOK that in its German form has attracted much attention is *Spiritual Director and Physician*, by Father V. RAYMOND, O.P., Chaplain to the Kneipp Institute at Woerishofen, an English translation of which (London: R. and T. Washbourne, Limited. 1914. Pp. 334. Price 5*s.* net), by Dom ALOYSIUS SMITH, C.R.L., has recently been published. The original book received the warmest endorsements from Dr. Masquin, Dr. Bonnaymé, and Professor Dubois, of Berne. The book is divided into three parts. In Part I., after a general introduction on suffering, the subjects of neurosis, hysteria, and psychasthenia are dealt with. In Part II. scruples and the confession of the scrupulous, temptation and sin, temptations and purity, and difficulties in prayer are considered. The third part is largely theological, save for the chapter on the treatment of neurosis. So far as the subject matter is concerned, despite the fundamental difference of point of view, Professor Dubois, in his prefatory words, speaking as "a freethinker brought up in Protestantism," is yet able to say: "I shall make a point of placing your book in the hands of those of my patients who suffer from religious scruples, however little religious faith they may have, and you will be an aid to me in my work." The tact of the author is exemplified in the preface, in his answer to the criticism that the question of personal responsibility has been omitted, and thereby the scientific value of the book diminished. To this Father Raymond replies: "This matter was designedly left aside. It is a problem that is calculated to embarrass the best equipped and most balanced minds, whereas these pages must be of such a nature that they can be safely placed in the hands of persons who are nervous and scrupulous, and whose imaginations are beyond all control. Being victims of fear, they are liable to see and retain whatever is likely to trouble them. Place before them any theory regarding responsibility and they would only be impressed by the thought of the obligations and their serious consequences. The cases which exempt from responsibility would escape their notice altogether." The book is worthy of study by clergymen of all denominations and by medical men.—Prayer as a therapeutic agent has been much in the forefront of late. While, as Sir Dyce Duckworth expressed it at the Church Congress in 1910, the medical profession can neither act as thaumaturgists nor sanction any such efforts in substitution for scientific treatment, it will gladly welcome any inspiration and assurance that may come from appropriate ministration at the hands of any Christian minister as a reinforcement of its professional efforts. In reviewing previous books on this subject we have disclaimed any idea of minimising the power of prayer or the consolations of religion to those to whom they appeal. A little book, entitled *Prayers for Healing from the Ancient Liturgies and Other Offices of the Church* (London: H. R. Allenson, Limited. Pp. 96. Price 1*s.* net), compiled by E. B. H., has a suggestive value in this respect, in that it discloses two very important differences in character and tone between the prayers of the early Church in respect of sickness and those of later date. These ancient prayers in no case adopt the depressing assumption that sickness is a divine chastisement, a suggestion which of itself is an antitherapeutic agent, but, on the contrary, speak always in stimulating and tonic terms of faith and confidence, without any trace of such a limiting clause as "if it be Thy will," the early Church, as the author says, appearing to have entertained no doubt about God's will in the matter of sickness. Herein, we venture to submit, is a possible ground for the greater reputed effect of prayer against sickness in the early Church. No less than 21 different liturgies—i.e., Eucharistic offices—dating from those of St. Mark and St. James in the second century to the 1662 revision of the Book of Common Prayer, are drawn upon.—In view of the exceptionally temperate and obviously sincere and earnest character of *A Plea for the Thorough and Unbiassed Investigation of Christian Science* (London: J. M. Dent and Sons, Limited. 1913. Pp. 204. Price 1*s.* net), by AN ENQUIRER, we mention the receipt of this book here. We have read it carefully from cover to cover and we are unable to see that it advances a single new point or one that has not already been amply considered and, in our opinion, confuted. But in any case we cannot open our

columns to a discussion that must be profitless, since argument between people who cannot agree upon the fundamental axioms is futile.

A little book that deserves particular mention at this season of the year, when people are planning what to do during their annual vacation, is *Cheap Continental Holidays* (London: The Scientific Press, Limited. Pp. 172. Price 1*s.* net), by GRACE VALLOIS, who is described as the *Nursing Mirror* Travel Correspondent. In THE LANCET of Jan. 17th last we noticed a good little book, "First Steps in Collecting," by the same lady, and now after reading "Cheap Continental Holidays" we begin to realise how she managed to pick up such extensive practical knowledge of the way to do things. Madame Vallois first shows how it is that some foreign holidays may be made cheaper than those in England. She next makes clear to "all fellow travellers with slender purses" how far £5 can be made to go. Some useful hints to travellers and some admirable remarks on clothing follow. The following trips are described: *The Ardennes, *The Bay of St. Malo, Mont St. Michel, Amsterdam, Lucerne, *Bruges, Caen and Bayeux, the Rhine, Florence, *Ghent, Western Flanders, Caudebec-en-Caux, The Hague, and *Brussels, those marked with an asterisk being places where a short holiday, including travelling, may be spent for £5. These articles are no dryasdust rehash of other guide-books, but are full of the author's personal hints and experiences, with much of history and literary sidelights not to be found in the school-books and guides.

We have received two excellent books on matters relating to household economy. *The Kitchen Garden and the Cook* (London: Smith, Elder, and Co. 1913. Pp. 283. Price 5*s.* net), by CECILIA MARIA PEARSE, is an exhaustive and detailed description of the methods of growing kitchen vegetables and of more excellent ways of cooking them when grown than can be found in any book we have seen. The profusion of methods of cooking is almost bewildering. There is also an excellent chapter on cakes and puddings without eggs, with some hints on cooking in paper bags.—The other book is *Foods and Household Management: a Text-Book of the Household Arts* (New York: The Macmillan Company. 1914. Pp. 402. Price 5*s.* net), by HELEN KINNE and ANNA M. COOLEY, B.S. It is a scientific and clearly and comprehensively written book on food and food values. It contains some 160 carefully selected and tested recipes, with clear directions for cooking not only the things customary among all Anglo-Saxon peoples, but also many American specialties. Reasons are given for all ways of preparing food. The book is full also of practical hints upon housekeeping—accounts, electricity and gas, kitchen apparatus, cleaning fabrics and furniture, how to buy, housewifery, "laundering" and dry cleaning, and so forth. For English readers, however, the section on the household budget will be of little use, being based on an American standard of prices. Moreover, the methods of cutting up a beast differ not a little in America and England. But the English housewife can learn a lot from the book.

JOURNALS AND MAGAZINES.

Quarterly Journal of Medicine. Edited by WILLIAM OSLER, J. ROSE BRADFORD, A. E. GARROD, R. HUTCHISON, H. D. ROLLESTON, and W. HALE WHITE. Vol. VII., No. 27. April, 1914. Oxford: At the Clarendon Press. London, Edinburgh, New York, Toronto, and Melbourne: Humphrey Milford. Subscription price, 25*s.* per annum; single numbers, 8*s.* 6*d.* each.—The contents of this number are: 1. Observations on Paroxysmal Tachycardia, by H. G. Butterfield and G. H. Hunt. The term is restricted to cases of rapid and regular tachycardia, where the impulse causing contraction arises at some focus other than the sino-auricular node. In two of the cases described in this article the ectopic focus lay in the auricle, in one in the ventricle, and in the fourth either in the auricle or junctional tissues. The special interest of the paper is due to the fact that in three of the cases post-mortem examinations were made, and the histological investigation corroborated the diagnosis made from the electrocardiograms. 2. Cholesterin: An Account of the Relations to Pathology and Physiology, by J. W. McNee. An interesting review of the literature of this subject is given, together with an account of some experiments. The methods of determining the cholesterin content of the blood serum are briefly discussed. A marked increase in the cholesterin in the serum is found almost constantly in cases of arteriosclerosis, in chronic Bright's disease, jaundice, diabetes mellitus, xanthoma, and pregnancy, while it is decreased in almost all febrile diseases except enteric fever, in tuberculosis, and in old age. It has been found that in jaundice a marked change occurs in the proportions of cholesterin and cholesterin ester. Normally cholesterin ester forms much the larger part, while in jaundice a great increase in free cholesterin is found. The changes in cholesterin metabolism during pregnancy are discussed in relation to the special liability of women to gall-stones. The hypercholesterinæmia during pregnancy is a considerable one, and Dr. McNee has found that there is also a marked increase in the cholesterin of the bile during pregnancy. 3. Bilateral Salivary Swellings (Mikulicz's Disease): A Clinical Review, by Hugh Thursfield. A fatal case of this condition is recorded, and a case in the literature recorded by von Brunn is referred to. Both of them are regarded by Dr. Thursfield as atypical (aleukæmic) leukæmia. Dr. Thursfield refers to eight groups of cases in which bilateral swellings of the salivary glands form the most characteristic symptom. He gives a review of the literature and discusses the pathology of the more important groups. 4. On the Prognosis of Acute Articular Rheumatism, by Charles G. Kemp. A series of cases is analysed to determine what proportion pass through the illness to complete convalescence without showing clinical signs of cardiac involvement, and further, what proportion having shown such signs during the acute stage of the disease progress to complete cardiac recovery. 5. Critical Review: Anaphylaxis and its Bearing on Medicine, by James McIntosh. An interesting and suggestive summary of the phenomena of anaphylaxis and their applications is given, together with the theoretical explanations which have been propounded. 6. Critical Review: Bacterial Endocarditis, by Irving Simons. This is an important and instructive analysis of cases of endocarditis associated with the presence of bacteria in the valvular lesions and in the circulating blood during life.

The Modern Hospital.—This is a monthly journal devoted to the building, equipment, and administration of hospitals, sanatoriums, and allied institutions, and to their medical, surgical, and nursing services. It is published at St. Louis, Mo., and, like most American periodicals, is well printed and illustrated, and contains American views, and descriptions of American procedures, that may be valuable to British workers. The first number opens with an article on the Dividing Line between General Hospital and Hospital for Insane, by Dr. W. A. White, superintendent of the Government Hospital for the Insane, Washington. The author makes a strong plea for the recognition of the fact that insanity is a disease "in a practical manner by admitting people for advice and treatment to the various institutions conducted by medical charity on the same basis as patients are admitted for other maladies." He deplores the fact that the mental patient has, in all countries to some extent, to undergo the tedious and humiliating process of the law which brands him with legal disability before he can obtain relief. He says: "The city that fails in its general hospital scheme to provide for a psychopathic ward loses a golden opportunity."—Dr. W. P. Gerhard, consulting sanitary expert, New York, contributes the first part of a serial on Recent Examples of Hospital Construction in Europe, the result of inspection in a number of German cities of the latest examples of hospital planning, equipment, and construction. In this number he describes the Hospital and Sanatorium at Beelitz, near Berlin. The article is profusely illustrated by plans and views. Some, such as "lavatory with special bowls for mouth gargling," are most instructive.—Miss E. M. Lawler, superintendent of nurses and principal of the training school, publishes a fourth paper on the Organisation of the Nursing Department of Johns Hopkins Hospital. Taking for her motto, "All hinges on attention to details," she minutely describes the system of this famous hospital.—Dr. J. W. Fowler writes about the newly erected Municipal Hospital at Louisville, of which he is superintendent. One of the architectural difficulties was the duplication of

the wards, dining-rooms, &c., in order to separate the coloured from the white patients.—Dr. J. F. Clarke discusses the Advantages and Disadvantages of a Small Home Hospital. The new "Iowa idea," by which the people of rural communities are building hospitals for themselves, is spreading rapidly over the United States and is arousing much comment. The medical profession in the cities frowns upon such institutions, but Dr. Clarke believes that they will be universally adopted. He concludes that the balance is in favour of the small hospital near the patient's home. In addition to convenience of access it provides better air, greater quietness, and purer and fresher food, and trains the local practitioners. The individuality of the patient is more recognised and he does not become a "number" as in a large institution. For maternity cases a small hospital is, Dr. Clarke thinks, vastly superior to the patient's home.

British Dental Journal.—In the issue for March 16th Mr. Octavius R. Ennion gives an account of an interesting case of Necrosis of the Mandible. The patient, a girl 11 years of age, had suffered from scarlet fever, the convalescence from which was considerably delayed by a septic condition of the throat. The necrosis of the mandible apparently started from infection through a carious right second premolar. The periosteum was from time to time stripped of the necrosed bone and the buccal cavity drained through an opening behind the angle of the jaw. The entire mandible, with the exception of a small portion of the left ascending ramus, eventually necrosed and was removed, the child making an excellent recovery. Photographs of the necrosed mandible and a skiagram showing the hard bone formation are given. Mr. Claude G. Colyer writes on Periodontal Disease, and Mr. H. E. Fullerton records a case of Cobalt Poisoning, the drug having been used to devitalise the pulp of a tooth.—The issue for April 1st contains a paper on Dental Education by Mr. W. Simms. The author favours the establishment of a representative dental council to control and overlook dental education. He considers that there is no subject included in the present curriculum which could be eliminated as unnecessary. With regard to the teaching in dental mechanics in the schools, he considers that there is a lack of constant authoritative supervision, and he advocates the appointment in dental schools of at least one individual who would devote his entire time to the development of dental science and teaching. Mr. David Ranken contributes a paper on Affections of the Naso-pharynx which cause deformation in and about the mouth.

CREMATION SOCIETY OF ENGLAND.—The annual general meeting of members of this society was held on April 7th in the West Lecture Hall of the Royal Society of Medicine. The President, Sir Charles Cameron, Bart., M.D., took the chair, and in his opening remarks pointed out that the society did not complain of the stringent precautions which were enacted in the case of cremation, but they did protest against the exclusive application of these to cremation, while nothing was done to remedy the scandalously lax requirements of the burial laws. The annual report for the past year, which was approved and adopted on the motion of the chairman, showed that during 1913 the total number of cremations carried out in Great Britain was 1188, as compared with 1134 in 1912. Of these more than half took place at Golders Green. Dr. Herbert T. Herring proposed and Sir John Tweedy seconded the election of Sir Malcolm A. Morris as a member of the council, and this was carried unanimously. On the motion of the chairman, the names of 21 persons who have rendered distinguished service in the cremation movement abroad were submitted to the meeting for adoption as honorary members of the society, and this was also carried unanimously, while a vote of thanks was accorded to the Royal Society of Medicine for lending their hall. Mr. Evan Bernays proposed a vote of thanks to Sir Charles Cameron. Dr. James Stewart, in seconding, said how much any reform movement depended upon its figure-head, and the society was to be congratulated upon having such a man as its president.

Reports and Analytical Records
FROM
THE LANCET LABORATORY.

OPTOCHIN.

(WIDENMANN, BROICHER, AND CO., LIMITED, 1, FENCHURCH-AVENUE, LONDON, E.C.)

Optochin is the name given to a white crystalline powder which is the chloride of ethyl-hydrocuprein. Ethyl-hydrocuprein is a derivative of quinine, which it resembles in regard to its chemical reactions. Optochin hydrochloride dissolves in water, forming a blue fluorescent solution when acidified with sulphuric acid. Caustic soda precipitates the base, which is soluble in chloroform. The solution also shows the green colouration characteristic of salts of quinine when treated with chlorine and ammonia. Ethyl-hydrocuprein differs from quinine in containing a C_2H_5 instead of CH_3 group, and there are present also two more atoms of hydrogen in the basic group. Recent chemico-therapeutic researches have shown this preparation to have a remarkable check action in pneumococcal infection, and a series of cases is quoted illustrating the applications of the drug in pneumonia and ophthalmic practice. It is administered in doses of from 1½ grains to 7½ grains by the mouth, the daily dose not exceeding 22½ grains.

VIROLAX.

(VIROL, LIMITED, 152 TO 156, OLD-STREET, LONDON, E.C.)

Virolax offers an agreeable means of administering liquid paraffin for laxative purposes. It has the appearance of concentrated malt extract, and the microscope shows that the mixture is perfectly homogeneous. On the addition of water it turns milky, due to the separation of oily globules. It has an agreeable flavour, and the presence of some lemon juice is an advantage in this connexion. There are present the constituents of the well-known restorative food virol. The moisture amounted to 10·19 per cent. and the mineral matter to 1·19 per cent. Analysis gave 36 per cent. of total unsaponifiable oil (petroleum).

CANADIAN CLUB WHISKY.

(HIRAM WALKER AND SONS, LIMITED, 20, COCKSPUR-STREET, TRAFALGAR-SQUARE, LONDON, S.W.)

This whisky has characteristics of its own which distinguish it from the distilled products of Ireland and Scotland. The flavour is peculiar, but the whisky is smooth to the palate, bearing evidence of a matured spirit. Its analysis presents also some differences compared with Irish or Scotch whisky. Thus the higher alcohols commonly known as fusel oil occur to a far less extent, and the furfural amounts to about a third of that present in all-malt pot-still whisky. The amount of secondary products found in 100,000 parts of alcohol present were as follows: aldehydes 13·2, furfural 1·30, ethers 84, and higher alcohols 80 parts. The amount of alcohol present was a little over 50 per cent. by volume. The extractives amounted to 0·17 per cent., and these contained some tannin and a substance which reduces Fehling's solution. The volatile acidity reckoned as acetic acid amounted to 0·042 per cent., the fixed acidity reckoned as tartaric acid to 0·0075 per cent., and the mineral matter to 0·04 per cent. The character of the extractives

indicates storage in cask, and thus justifies a statement made to this effect.

(1) "TABLOID" OPHTHALMIC ZINC SULPHATE COMP.; (2) "TABLOID" HYPODERMIC EMETINE HYDROCHLORIDE; (3) "VAPOROLE" EMETINE HYDROCHLORIDE.

(MESSRS. BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

(1) The tabloid ophthalmic zinc sulphate provides an obviously useful formula in ophthalmic practice. It contains zinc sulphate 1/5th grain, boric acid 1/20th grain, tincture opium 1/15th minim, and epenine, the synthetic hæmostatic behaving like suprarenal extract, 1/10th grain. The formula has been particularly valuable in relieving painful and troublesome conjunctivitis caused by dust, as, for example, in the case of motorists and others. (2) The tabloid hypodermic emetine hydrochloride introduces a new strength of this drug, which contains 1 grain of the salt; and (3) the sterile solution (vaporole) also contains 1 grain in a convenient form for hypodermic injection. It is desirable, of course, in employing this remarkably useful drug in the treatment of amœbic dysentery to determine and to secure its accurate dosage.

STANDARD PHARMACEUTICAL PREPARATIONS.

(MESSRS. CORBYN, STACEY, AND CO., LIMITED, 673, COMMERCIAL-ROAD, LONDON, E.)

We have received from the above firm some specimens of pharmaceutical preparations manufactured under certain modified processes that add to the elegance of the product, while preventing a loss of therapeutically active principles. They are standardised in accordance with the requirements of the Pharmacopœia. Amongst the preparations which we examined were tincture of opium and tincture of ergot, both of which are perfectly bright and permanent fluids. Other preparations were an infusion of buchu and of gentian, both of which are concentrated, and for use require dilution to 1 in 7.

UNG. "CYCLOFORM" (BAYER).

(THE BAYER COMPANY, LIMITED, 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

This is a yellowish-white homogeneous ointment contained in a collapsible tube, and its chief application appears to be in hæmorrhoids and pruritus. Its suitability for such purposes will be understood from its composition. The ointment basis contains some zinc oxide, but the important constituents are cycloform (the iso-butyl ester of para-amino benzoic acid), a local analgesic, and extract of witch hazel, well-known as a styptic and astringent.

ULTRA-VIOLET RAY WATER STERILISER.

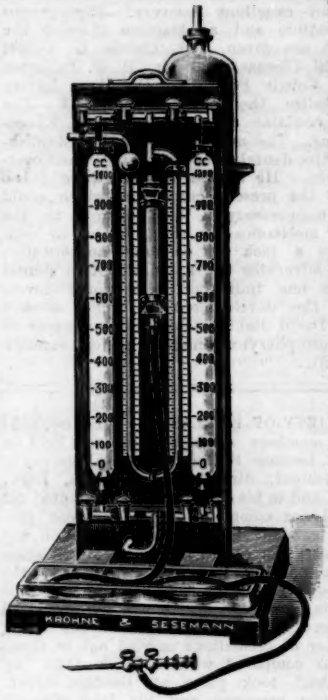
(THE WESTINGHOUSE COOPER HEWITT COMPANY, 80, YORK-ROAD, KING'S CROSS, LONDON, N.)

This ingenious apparatus provides for a regulated flow of water under a bombardment of ultra-violet rays from a powerful quartz vapour mercury lamp. There is an automatic cut-out which comes into operation should the lamp go out. This we found to work quite satisfactorily. The maximum capacity of the apparatus is about two litres per minute. The makers state that this type is suitable for industrial use and may be employed in schools, business premises, or factories. The water, of course, undergoes no perceptible chemical change. We have made experiments in regard to its sterilising power, and the results were striking. A heavily infected water was employed, the control showing on gelatine plates 6400 organisms per c.c. In the first experiment the rate of flow was 500 c.c. in 50 seconds. Bacillus coli was present in 1 c.c. of the ingoing water, but the total number of organisms found in the effluent was 23 per c.c.; there were, however, no bacilli present in 100 c.c. In the second experiment the rate of flow was increased, that is to say, to 500 c.c. in 25 seconds; the total organisms per c.c. was 38, but again bacillus coli was not present in 100 c.c. These experiments show, apparently, that the bacillus coli is quite killed off. The complete annihilation of bacillus coli and the reduction of from 6400 to 38 organisms per c.c., illustrate the remarkable bactericidal action of ultra-violet rays.

New Inventions.

A GAS INJECTING APPARATUS.

THE illustration shows a new form of apparatus which is now in use at the Pinewood Sanatorium, Wokingham, for injecting nitrogen or oxygen gas into the pleural cavity. Hitherto I have used, for the production of artificial pneumothorax, Morriston Davies's first modification of Kornmann's apparatus. This I have simplified as follows:—*a*. Two 1000 c.c. cylinders are provided, one for oxygen and one for nitrogen. Each has a "T" connexion both above and below, with a simple tap on each side. The upper outside tap is opened for filling with gas; the upper inside tap for allowing the gas to pass to the needle. The lower outside tap is for emptying only; the lower inside tap for letting the water pressure on to the gas in the cylinder. This last is the only one utilised once the operation is commenced. *b*. The displacing fluid is contained in a large bottle reservoir placed on a shelf behind, above the level of the top of the gas cylinders, and connected to them below by a tube which runs down the back of the stand. *c*. A glass tray is provided to hold the tube and needle. *d*. A second tap has been added to the needle, thus giving complete control in case of emergency without taking the hands off the needle.



The controlling taps on the apparatus (the lower inside ones) are not comfortably accessible as shown, and should run from before back instead of from above down. With this alteration the apparatus will be found to be very easily worked, and to be as nearly as possible fool-proof.

The apparatus is made by Messrs. Krohne and Sesemann, Duke-street, Manchester-square, London, W.

F. KINCAID ETLINGER, M.R.C.S. Eng., L.R.C.P. Lond.
Wokingham.

THE LANCET.

LONDON: SATURDAY, APRIL 18, 1914.

Medical Aid Institutes.

IN the Supplement to the *British Medical Journal* of Saturday, April 4th, there is published a memorandum by the joint Medico-political and Hospitals Committees of the Association concerning the question of medical aid institutes, and it merits the close attention of the medical profession. The memorandum defines roughly what is meant by a medical institute as follows: It is an association which provides medical attendance for subscribing members, as a rule through whole-time medical officers paid by salary, and which collects regular contributions from its members, either directly or by deduction from wages. The memorandum proceeds to trace the origin of these institutes, quoting their early history as given in the investigations undertaken by THE LANCET 19 years ago under the title of the "Battle of the Clubs." Those articles, written under this collective title by our Special Commissioner, showed clearly that persons by joining such institutes could obtain medical service upon a more or less charitable basis to which they were not entitled owing to their pecuniary position, while further investigation proved that the membership of the institutes was recruited by a system of canvassing which brought their medical officers into an unprofessional and unethical position. Some of these officers were actually sweated, being entirely at the mercy of lay organisations, which paid inadequate salaries and retained money due to the medical profession, inasmuch as it had been received in return for medical benefit and earned by medical effort. The attitude of the medical profession towards these institutes, when their real meaning and the abuses that were rife under them had been made clear, rapidly became one of general antagonism. This is not to deny that sometimes the institutes were quite properly managed, for often the managing committees and the members of these institutes were on perfectly good terms with their medical officers. There is no desire to conceal the fact that a certain number of medical men, and, curiously enough, not always the best paid, appeared to be perfectly satisfied with their plight, while in some cases medical men frankly allowed that employment by the institutes was very serviceable to them. But the fact that here and there the institutes appeared to work satisfactorily had no weight in general professional opinion against the view that such working for laymen under contract was an inherently vicious scheme. The medical officers of these institutes were, as a rule, badly paid; they were at the beck and call of lay employers; and they were asked to undertake a mass of work which it was certain could not be properly discharged under modern conditions of scientific medical practice. Such was the feeling among medical men when the scheme for national insurance was first made public, and the most valuable argument which Mr. LLOYD GEORGE could bring forward in support of the National Insurance Act was the abolition of the abuses existent under contract practice of this sort, even though panel practice under the Act could not appear in any other guise than as a vast extension of contract practice. One of the main promises of the Act, as set out by the promoters of the legislation, was the introduction of a state of affairs under which the medical practitioner would receive what he earned, and would be free from lay control in professional affairs.

Until recently the medical profession has been content to believe that under the Act, free choice of doctor being allowed to insured persons, the danger of sweated medical service was overpast. The "Battle of the Clubs," however, is not yet won by the medical profession, and it is to prove this point that the memorandum in the supplement of the *British Medical Journal* has been issued. As is well known, medical institutes which were in existence at the passing of the Act have been permitted to provide medical benefit to their members, subject to the approval of the National Insurance Commissioners. There are as yet not many of these institutes; Wales and the Welsh border appear to be their principal home. But it is necessary to recognise that under the amendment in question any of the old medical aid institutes may be resuscitated, and, if the organisers of the movement in this direction can obtain medical officers short-sighted enough to play into their hands, a serious condition of affairs may be brought about. Last November[1] our Special Commissioner, in the course of reporting upon medical practice under the National Insurance Act in various localities, pointed out that at Chesterfield serious competition had been set up against the medical men upon the panels of the National Insurance Act by a district medical association definitely formed to compete with them. The Chesterfield District Medical Association, working under Section 15, clause 4, of the Act, had recruited many insured members to what was essentially one of the old medical institutes, and according to our Special Commissioner had not been particularly scrupulous in the methods employed. At the time when he wrote the Chesterfield Medical Association had upon its books a large number of patients who, under the generally understood meaning of the National Insurance Act, should have been panel patients, and the needs of these patients were being met by an inadequate medical staff. A similar condition of things he found to have arisen at Derby, where

[1] THE LANCET, Nov. 1st, 1913, p. 1278.

it was estimated that about 4000 patients, of whom half were insured under the National Insurance Act, were members of an Amalgamated Friendly Societies Medical Aid Association and were attended by medical officers employed by that association; the members whereof were thus unable to exercise the free choice of doctor which was promised under the Act. At Swansea a similar movement owed its failure probably to the strong action of the Swansea Division of the British Medical Association, and in particular to the refusal of the staff of the Swansea General Hospital to treat patients, except in cases of grave urgency, that were not sent to them in the ordinary way by panel practitioners. On this point the memorandum of the joint committees of the British Medical Association states that although they do not consider the position of the present institutes strong, yet "they are bound to regard the recent tendency to the spread of 'systems' in South Wales as a real danger unless a more active attitude of opposition to all such institutions is adopted by the profession throughout the country."

We cordially agree with the memorandum, but cannot believe that the mischief will spread. For this reason we suggest that overt moves against practitioners who choose to take the pay of medical institutes will be attended with some risk. Chesterfield, Derby, and the South Welsh districts have revived the old club evils; more enlightened communities see the comparative advantages offered by the medical service of the panel practitioners. We do not anticipate much backsliding, relying here upon the good sense of the Commissioners in the advice that they will be called upon to give to the Insurance Committees. Our Special Commissioner's reports upon the working of the Act are at the present moment dealing with London, and he has nowhere recorded any organised attempt on the part of medical aid institutes to defeat the object of the Act or to oppose the working of the panels; and in the article next to appear, which deals with panel practice in Stepney and in such a typical outlying district as Enfield, he states expressly that both the public and the medical profession appear satisfied with the conditions under which medical benefits are administered.

The Need for Inspection of the Slum Laundry.

THE importance of the laundry as a sanitary institution can hardly be exaggerated, but it is, of course, desirable that the operations should be conducted within a sanitary environment. This can be managed with power laundries where facilities for keeping a clean bill of health exist, but where the work is done by hand sanitary requirements are often neglected. When the linen is sent to be washed at a power laundry the risk of the things receiving infection of any kind is comparatively small. The premises are used for no other purpose but laundering and are kept reasonably clean; there are no children running between the laundry and the school, interchanging infections; the workers employed are kept under scrutiny by the manager; whilst in his own interest the manager or proprietor is very careful not to accept soiled linen from any house where epidemic disease is in progress. Moreover, linen treated at a power laundry passes through processes which should go a long way towards sterilising it. The linen is treated in a closed machine, where, after a short preliminary soaking, it is washed with soap and soda at a low temperature; then boiled with fresh water and more soap and soda; then rinsed three times, the machine containing from 30 to 60 gallons of clean water for each rinse, so that 100 to 200 gallons of water are used for washing each machine load of linen. Suitable rooms for ironing and packing are provided usually, for a large number of power laundries have been built and equipped specially for the work they have to do; and it is an axiom of good laundry practice that the clean linen should never come into the neighbourhood of the soiled linen at any part of its career through the laundry.

In a well-equipped hand laundry the conditions may be satisfactory—it would be a very formidable state of affairs otherwise. The packing and sorting are often done under careful arrangements, and the linen is boiled in a copper; but there is not the facility for rinsing possessed by the power laundry, and, as the premises have not usually been designed for the purpose, it is more difficult to keep the clean and soiled linen rigidly separate. But below the level of the well-conducted hand laundry there are the small laundries of washerwomen who take in work from perhaps half-a-dozen customers, where all the rules of hygiene are ignored. Between these so-called "cottage," but in reality "slum," laundries and the well-conducted hand laundry no comparison is possible. They are commonly situated in some corner in a back street, and there is usually no sign by which they can be distinguished from the adjoining houses, except, perhaps, in dry weather, when some linen is hung out in the backyard. The house itself is usually old and more or less dilapidated. The work is carried out as often as not in the rooms where the proprietors live and sleep. The workers take their meals in the midst of the clean and the soiled linen, and in wet weather the washed linen is hung up to dry in the living and sleeping rooms. The workers themselves often belong to a low class, and there are sometimes numbers of children running about the place. No attempt is made to keep the clean and soiled linen from close proximity, nor is it possible to do so. The proprietors of the establishment are poor, and if infectious disease should appear in the house it is, where possible, carefully concealed, because its disclosure would entail loss of livelihood. And whereas in the case

of a properly equipped and conducted laundry linen from an infected house would be rigidly excluded, the temptation to take such linen at a good price would be too great to be resisted by one of these slum laundries. There are even worse conditions obtaining in some slum laundries. In large towns where public washhouses are provided by the municipality for the benefit of working-class women who possess no conveniences for the purpose in their own homes, these washhouses, the cost and upkeep of which are paid for out of the rates, are employed by professional washerwomen who take their customers' goods there. These women often live in the most wretched surroundings, and after the linen has been washed in the municipal washhouse it is taken back to the dangerous dwelling to be ironed and finished. These facts are notorious at every public washhouse, and municipalities are making efforts to cope with the evil by instituting an ascending scale of charges for the use of the washhouse after the first few hours, so as to discourage the professional washerwoman, but the evil still remains. And that the danger is not theoretical is known to medical men, for cases of the spread of epidemic disease have been definitely traced on many occasions to the insanitary conditions of the premises occupied by washerwomen.

It is clear that the average housewife cannot protect herself or her household. Very few women realise the risk they are running in respect of their arrangements for the family wash, or take the trouble to visit the premises of their washerwomen. All they usually know is that a cart or, perhaps, a barrow comes to the door, takes the soiled linen away, and in due course brings the "clean" linen back. So long as it is returned at the expected time, looking sufficiently clean, and the price for the washing is reasonable, all appears well. It is certain that better protection is required than can be afforded by the care of the householder. The Factory Act is useless here, because in the first place it only deals with questions of hours of employment, guarding of machinery, and sanitary conditions so far as the workers are concerned, although incidentally the inspection under the Act tends always to the raising of the general standard of hygiene. But these little unhygienic laundries barely come within the scope of the Act, and both in theory and in practice they entirely escape any kind of inspection. They are on no register, and their very existence is unsuspected even by municipal authorities. At the Home Office and the Board of Trade it is generally known that the staff is numerically incapable of dealing with more than the power laundries and the larger hand laundries which are readily open to inspection. At the inquiry before the Select Committee of the House of Commons last year into the proposal to apply the Trade Boards Act to certain departments of steam laundries, the Board of Trade admitted that it was impossible to undertake the gigantic task of the regulation of all laundries. It was even declared that the subject was so large that it was only proposed to deal with two departments of steam laundries, whilst other laundries were quite out of the question. Judging from the answer given by Mr. JOHN BURNS to a question in the House of Commons recently, the bureau over which he now presides is still of the opinion that inspection of all laundries cannot be undertaken. Let it be admitted then that the little laundries are so numerous that it would be out of the question for a Government department to deal with them directly: then the proper way of approaching the matter is through local authorities. To continue to do nothing is wrong. The necessity for the prevention of the evils consequent upon insanitary laundries is urgent. No time should be lost in making and enforcing regulations ensuring that persons who take in washing for profit, even if it be only for one customer, should be registered at the office of the local sanitary authority, and obtain a certificate from the medical officer of health that the premises and working conditions are hygienically satisfactory.

Procedure in the Coroner's Court.

THE comments made by Mr. Justice ATKIN upon the procedure followed by the coroner at the inquest on the poor boy STARCHFIELD raise issues wider than those of the actual incident. The learned judge expressed his disapproval of several steps that were taken, including the putting of leading questions to witnesses, the signing of depositions by the latter at their houses, and the fact of their being allowed to make corrections in the written copies submitted to them. For several reasons the strictures appear to have been based upon unfamiliarity with coroners' courts and were unduly severe, especially when applied to a coroner with a reputation so high as that of Dr. WYNN WESTCOTT, with a period of 30 years' admirable service to his credit. In the first place, Mr. Justice ATKIN seems to have assumed that definite rules of procedure for the examination of witnesses exist in the coroner's court, whereas it has frequently been admitted by judges of the High Court that the law of evidence need not be observed during the conduct of an inquest. Again, the coroner is only bound by the Coroners Act, and while this Act requires that depositions shall be signed by the witnesses and by the coroner, it does not say that they must be signed "in court." The procedure adopted may have been unusual, but it was not illegal, and was followed in this case, we can readily believe, for the purpose of economising time. The evidence was taken down in shorthand, and it was necessary to transcribe this before it could be signed. If the statements of the witnesses had been taken down in longhand, the inquest, which as it was lasted for three days, would have been seriously prolonged. But

perhaps the point deserving closest attention is the assumption underlying the whole of Mr. Justice ATKIN'S criticism of Dr. WYNN WESTCOTT'S conduct, that more or less rigid legal procedure can be observed in the coroner's courts. The learned judge does not appear fully to have realised the difficulties attending a preliminary inquiry where almost nothing is known of the circumstances at the commencement. At a trial in the High Court counsel has details of the alleged occurrences in his brief, and can obtain information from witnesses without putting leading questions; while the witnesses have already gone through several examinations and know what questions are likely to be put by their own side, and have their answers more or less clear in their minds. But the coroner has no prepared brief; he may know little or nothing of the evidence that is going to be adduced, and his inquiry must necessarily be more or less of a "fishing" character. Add to this the fact that he frequently has to deal with ignorant and illiterate witnesses who, if not closely questioned, might omit essential facts as seemingly unimportant, and it will be realised that the eliciting of a connected story with strict avoidance of leading questions would be a cumbersome and difficult process. And in the inquest on the boy STARCHFIELD, whether the procedure was irregular or not, no substantial effect was produced upon the course of justice, for the prisoner was committed by the magistrate and was tried on the magistrate's warrant. Moreover, the Recorder, in his charge to the grand jury, expressed the opinion that the case was a proper one to go for trial.

The question as to what rules of evidence should prevail in the coroner's court leads up to a larger question—What is the essential purpose for which an inquest is held? This question was very fully discussed at two meetings of the Medico-Legal Society last year, and the debate will be found in Vol. X. of the Transactions. At these meetings it was pointed out that while the original function of the coroner was to collect the KING'S revenues and to inquire into deaths for the purpose of ascertaining whether or not there was property which escheated to the Crown (which would occur if the deceased was an outlaw or felon), these duties, except in the case of treasure-trove, have now disappeared, while nothing has been definitely substituted for them. The evidence which was given before the Departmental Committee on Coroners' Law showed that most coroners consider their chief function to be the detection and prevention of crime; on the other hand, many attach equal, if not more, importance to the medical and scientific side of their inquiries. Recognition of the fact that a coroner has both legal and medical duties has led to the practice during recent years of appointing to the more important coronerships men who have had trainings in both law and medicine. But this only partially meets the difficulty. If the inquiry into the circumstance of a death is essentially for legal purposes, perhaps in connexion with crime, and perhaps in relation to questions of compensation, it may be convenient that the laws of evidence should prevail, and that legal procedure should be followed, but even here many coroners would prefer that the evidence should be tendered in any manner which makes for the discovery of truth.[1] On the other hand, if the chief object of the inquest is to determine the pathological cause of death, the coroner should be a medical man and should be entirely free to take any evidence he may think of value. Always the dual nature of the coroner's duties and responsibilities has to be thought of.

Of course, both aspects of his functions are of the highest importance to the community, but without expressing any strong opinion as to which should be adopted as the guiding principle, it may be pointed out that the legal side is already fully dealt with by other tribunals, while the medical side is scarcely provided for at all. The magistrate conducts a preliminary inquiry in accordance with the law of evidence into charges of murder. The existing double inquiry may be superfluous or actually prejudicial to the cause of justice—the risks have to be balanced against the added opportunities for getting at the truth. The jury at the trial may be biased by the fact that a definite verdict against the prisoner has already been returned at the inquest, and they may, through the medium of the newspapers, have become cognisant of matters which they ought not to know, which have not been legally established, and would not have been brought out at an inquiry where the law of evidence prevailed. Again, the coroner's verdict does not settle claims for compensation, and such questions must be investigated *de novo* in the county courts and higher courts. But the importance of obtaining scientific information relating to the pathological conditions underlying deaths from causes other than natural steadily increases. Such information is wanted for legislative and administrative purposes in connexion with the prevention of industrial diseases, accidents, overlying, improper feeding, and other causes of infant mortality. It is also urgently needed for the advancement of scientific medicine. It is understood that sooner or later the Home Office will introduce a Bill for amendment of the Coroners' Law. We venture to express the hope that before framing their measure they will consider carefully the two aspects of an inquest, so well and terribly illustrated in the STARCHFIELD case, and will endeavour to increase the usefulness of the inquest as a means of obtaining scientific knowledge.

[1] THE LANCET, May 24th, 1913, p. 1465.

Annotations.

"Ne quid nimis."

ETHERISATION BY COLONIC ABSORPTION.

IN 1847, the year in which Sir James Young Simpson revealed the possibilities of chloroform to a world expectant of the ultimate conquest of pain by the inhalation of anæsthetic vapours, Pirogoff, the great Russian surgeon, then in his thirty-seventh year, declared that the system of pulmonary anæsthesia would soon be wholly superseded by rectal etherisation! Roux was equally enthusiastic, but Magendie was the first to indicate that injecting ether into the bowel was at least dangerous and would be usually fatal. The mishaps, and they have not been few, which were recorded by those who attempted to employ the rectal mucous membrane as the area of absorption, are explicable by the work of the great physiologist. When this method of introducing the ether vapour allows condensation into liquid to occur in the bowel, proctitis, meteorism and paralytic distension, even fatal ulceration of the mucous membrane, may occur. Buxton, who introduced the method into this country some 20 years ago, was alive to this danger, and guarded against it by devising a special apparatus which he believed prevented any liquid ether entering the bowel. However, other methods of promoting the entrance of ether by this route have been suggested. Arnd employs a 5 per cent. solution of ether shaken up in warmed saline, but the procedure has not proved wholly successful, and it is not certain whether it possesses inherent advantages over the direct introduction of ether vapour by a suitable apparatus. We possess at the present time possibilities, by using an electric motor, of propelling heated air mixed with warm ether vapour into the bowel in definite proportion and at a given rate. The most recent development of colonic etherisation we owe to Dr. J. T. Gwathmey,[1] an account of whose pioneer work in this direction appeared in THE LANCET last year.[2] His experiments made upon dogs convinced him that an oil and ether mixture offered a reliable means of introducing the anæsthetic by colonic absorption, and that this method obviated some of the assumed dangers of inhalational methods. We are often struck by the fact that each new suggestion with regard to anæsthesia is commonly heralded by somewhat alarming statements of the perils of the established procedures. However, Dr. Gwathmey's plea for colonic etherisation possesses claims more valid than those which rest upon mere depreciation of the older methods of giving ether. Although his experiments and hospital cases have been free from dangerous complications, he frankly draws attention to the possibility of such occurring, due, as he pertinently puts it, to the extreme simplicity of the method and of the technique by which it is put into practice. It is necessary to cleanse the bowel, and this having been carefully carried out, the technique consists of injecting into the rectum one hour before the operation a mixture of 2 to 4 drachms of ether with an equal amount of pure olive oil in which are dissolved 5 to 10 grains of chlor-butyl. Then half an hour before the operation a hypodermic injection of morphine and atropine is given. Fifteen minutes before the operation the patient is placed on his left side in a modified Sims's posture and a mixture of 75 parts of liquid ether well mixed with 25 parts of olive oil is slowly introduced into the bowel by means of a rectal tube 28 inches in length with a diameter of one-fourth of an inch; this is clamped and fed from a glass funnel connected with a Lockwood tube 30 inches in length and three-eighths of an inch in diameter. One ounce is required for each 20 lb. of the patient's body weight, and this quantity (℥i) is injected each minute until the requisite amount has entered. As in the case of rectal etherisation by ordinary methods, the utmost care has to be taken to secure the patency of the air-passages, while should evidence of over-narcotisation appear the bowel is emptied of the ether mixture and the colon irrigated with oil or cold water to excite expulsive action. Massaging the colon from right to left assists in expelling the ether-oil mixture. Dr. Gwathmey regards his experience and that of others who have adopted his procedure as being, so far, quite encouraging. Undesirable sequelæ have been absent in his personal practice, while although some dangerous cases have been reported, he believes these are due wholly to errors of technique or to neglect of obvious precautions. He states that he has had 200 successful cases, but adds that in 100 of these a supplementary inhalation anæsthetic was required because the ether-oil narcosis proved too light for these particular cases. No doubt wider experience is necessary to perfect the technique of what appears to be a method offering obvious advantages in suitable cases. However, it has yet to be seen whether, when a larger number of patients have been subjected to this procedure, dangers and difficulties may not arise such as we know to have arisen when extensive trials have been made of the older plans of achieving ether anæsthesia by rectal absorption. The bland nature of olive oil and its avidity for ether would, however, lead us to hope that such sequelæ may be absent in the method we have described. Dr. Gwathmey states that he is experimenting with other drugs besides ether for use by colonic absorption, but it is at present premature to discuss the possibilities these present or to offer criticism until our knowledge is more extended and more precise.

[1] New York Medical Journal, Jan. 24th and March 28th, 1914.
[2] THE LANCET, Dec. 20th, p. 1756.

ALCOHOL AND LONGEVITY.

IT is frequently asserted by the more extreme opponents of the dietetic use of alcohol that the evidence of insurance statistics establishes beyond all cavil the advantages accruing to health from the practice of total abstinence. The ground for this assertion is the fact that insurance societies which have a separate section of total abstainers find that the mortality in that special class is considerably lower than in the general mass of policy-holders. For instance, in the United Kingdom Provident Institution, whose records are most often quoted in this connexion, the ratio of actual to expected claims, calculated over a considerable term of years, works out at 70·47 per cent. in the temperance section, while in the general section it comes to 93·14 per cent., and very similar results have been noted in the case of other large societies here and

in America. Statistics of this sort are admittedly unbiased, and their accuracy will not, of course, be disputed. But what is by no means equally evident is the soundness of the conclusions founded on them by the advocates of total abstinence. In an article published in the *American Underwriter* for July, 1913, and now issued in pamphlet form,[1] Mr. Phelps, the editor of that journal, and a well-known authority on insurance questions, draws attention to what he very reasonably regards as the most serious source of fallacy in this particular statistical argument—namely, the possible differences in other respects besides drinking habits between the contrasted groups of abstainers and non-abstainers. As supporting his criticism, he quotes the results of an investigation carried out by Dr. Dwight, medical director of the New England Mutual Life Insurance Company, who found that total abstinence from tobacco appeared to have almost exactly the same relation to longevity as total abstinence from alcohol. This fact suggests the need of extreme caution before we assume that the lower mortality of total abstainers is wholly due to their avoidance of alcohol. Possibly we should be nearer the truth in adopting the view put forward tentatively by Mr. Phelps that abstainers, whether from alcohol or from tobacco, are as a class of somewhat different type or live under different, and on the whole less strenuous, conditions as compared with the general run of persons who indulge in these luxuries. At all events, it is clear that insurance statistics cannot be regarded as furnishing any legitimate ground for the assertion that the moderate use of alcohol is injurious to health, and the attempt to represent them as proving such a statement can only do harm to the cause of true temperance.

SKIAGRAPHY OF THE FALLOPIAN TUBES.

THE investigation of the ureter and pelvis of the kidney by means of X ray photographs following the injection of silver salts (collargol especially) is so successful and so generally practised by urologists that the extension of the same principle to the Fallopian tube must have occurred to gynæcologists as practicable. Dr. W. H. Cary, of Brooklyn, has carried out the idea, and reports his experience in the March issue of the *American Journal of Obstetrics*. In a patient who complained of continuous pelvic pain without any gross physical signs to account for it he injected 10 c.c. of collargol solution through the cervix under anæsthesia. He then opened the abdomen and found the solution oozing from the right tube, but none flowing from the left one. After freeing some adhesions the latter was removed; it appeared to be normal until dissected afterwards, when it was found to be completely occluded near the uterine end. This occlusion was well shown by the X ray photograph taken just before opening the abdomen. It is clear that this method, if it proves to be safe, may influence very markedly the diagnosis of the cause of sterility and its treatment in cases where Fallopian obstruction is shown to exist. The process is contra-indicated whenever recent pelvic inflammation or any form of infection exists. Dr. Cory suggests that at least three months of freedom from acute inflammatory symptoms should elapse before undertaking it. Retro-displacement of the uterus or prolapse of the adnexa may cloud the picture; the former should be corrected before the injection is made. The patient is placed in position with the X ray apparatus and plate all ready for action. By speculum and tenaculum the cervix is exposed and steadied. A glass intra-uterine instillation tube is passed through the os, which it should fit closely; the silver solution is then slowly injected and the skiagram immediately taken. The average content of the uterine cavity is stated at eight minims. It remains to be seen whether this procedure is free from risk, and also whether the collargol has any beneficial action on tubal infections.

[1] The Supposed Death-rates of Abstainers and Non-abstainers and their Lack of Scientific Value. By E. B. Phelps, M.A., F.S.S. New York: Thrift Publishing Company. 1913. Pp. 30.

THE VICTORIA HOSPITAL, BLACKPOOL.

THE regrettable dispute between the medical men at Blackpool and the board of management of the hospital appears to be no nearer a settlement. The circumstances out of which it arose were described in THE LANCET of March 21st, p. 867. Since then, at the annual meeting of donors and subscribers to the hospital, after a prolonged discussion a resolution, based upon a suggestion of Dr. T. Carr, was carried unanimously to the effect that the medical men of the town should appoint a committee of six to explain what reorganisation and changes the medical practitioners would be prepared to accept. At a subsequent meeting, however, of the medical profession practising in the town it was resolved to forward a letter to the board stating that until the medical men's demands for two seats on the board, for the resignation of the matron, and for the resignation of a medical practitioner still on the board were complied with, the medical men refused to meet the board. The letter was forwarded, and in reply the board has stated that the matron has resigned and that the board has received her resignation with regret, but that the board has no power to comply with the request for two seats, as its members are appointed by the donors and subscribers. The medical member of the board was appointed by the donors, and the board had, they said, no power to call for his resignation even if it wished. It would seem, and it is a matter for extreme regret, that a deadlock has arisen without full discussion and at a point at which discussion might have resulted in a way out of the difficulty being found. That the difficulty is one not easily to be arranged, even after each side has had the opportunity to express its views, is only too evident. The medical men on the one side possess full sympathy not only from the members of their profession, but from a large section of the lay public. They are seeking nothing for themselves, but primarily have espoused the cause of two nurses whose treatment meted out to them by the board, under the immediate observation of the medical staff of the hospital, has appeared to that staff to be harsh and unjust. It may here be said that from all accounts of that treatment which have been made public it was such as might well justify the attitude of the medical men, and it must be remembered that, whatever there was in the conduct of the nurses which the board resented, the dispute arose out of complaints with regard to the feeding of the nursing staff, as to the justice of which the medical staff was well able to

form and express an opinion. Again, in connexion with the constitution of the board, the medical men of the town are certainly entitled to hold opinions, and to have those opinions carefully and sympathetically weighed by the subscribers to the hospital. At the same time, a board may naturally hesitate to admit itself at the outset of a discussion to have been wrong in the initial stages of the matter to be discussed. The affair has reached a stage at which every attempt should be made to bring about a settlement, and, if this cannot be obtained by the parties meeting, it may be suggested that they should refer their differences to arbitration. It should not be difficult, or at any rate not impossible, to find persons of experience in hospital management absolutely independent of local prejudice or interest, and having the necessary judicial qualities, who would be willing to give careful hearing to both sides, and be able to decide in the best interests of the hospital what the future constitution of its board should be—and this may now be regarded as the essential matter in dispute. A pronouncement as to the incidents which have been referred to in connexion with the nursing staff could be added. It would, however, be necessary for both sides to agree to abide by the arbitration.

A NEW CUTANEOUS REACTION IN PREGNANCY.

IT is now generally recognised that the process of gestation is associated with general changes in the organism as well as with the growth of the fœtus and the local alterations in the uterus. It has been proved that some of the glands with internal secretions show definite histological changes, and numerous observers have found that in pregnancy protein substances foreign to the normal blood are in circulation. Abderhalden has further proved that the organism produces defensive ferments to break such proteins down. He has applied this observation to develop a test for pregnancy, which is at present on its trial. The idea occurred to Dr. Ernest Engelhorn, of Erlangen, that it might be possible to demonstrate the presence of these substances by inoculation, on the analogy of the tuberculin reaction of von Pirquet, the luetin reaction of Noguchi, and the trichophyton reaction employed by dermatologists. As a consequence he has made some observations in collaboration with Dr. Hermann Wintz, and these are published in an interesting preliminary note in the *Münchener Medizinische Wochenschrift* of March 31st. Starting with the assumption that materials from the placenta must enter into the general circulation of the pregnant woman, they have prepared a placental extract to which they give the name "placentin." They do not give the details of its preparation, but simply state that it is a somewhat complicated process and that they are engaged in experiments with a view to its simplification. They have used this substance exactly in the same manner as tuberculin is employed in von Pirquet's reaction. The site of inoculation is inspected at 12, 24, and 36 hours afterwards. A positive reaction consists in an inflammatory swelling and reddening of the inoculated areas, with a light brown staining around them. In every case two places were inoculated with the placentin, a third line being simply scratched with the lancet as a control. In cases showing a positive result the reaction is usually most distinct after 36 hours. In 70 pregnant women the test was positive in every case, the pregnancies being of all stages from the second month to full term. The reaction was tried in 54 non-pregnant patients, including children and 13 men. In all adult persons it gave a negative result, save that in three women who were inoculated very shortly before the expected onset of the period a slight irritation of the inoculated area occurred, but so slight that in comparison with the reaction in pregnant women it could only be called negative. Dr. Engelhorn and Dr. Wintz point out that this result may be of some interest in the light of the recent observations of Kjaergaard to the effect that before the period there is an increase in the proteolytic power of the blood serum in women, and that the serum under these conditions may give a positive Abderhalden's pregnancy reaction. One peculiar result was obtained with the inoculations of placentin, in the case of a child, aged 6 years, with an affection of the bladder, the reaction being positive. The authors are now engaged in further investigations. They make no claim as yet for the practical value of their reaction as a diagnostic measure, but hold that it is at least of theoretical interest. It is, further, of some significance that very shortly after parturition a negative result is obtained.

THIRD INTERNATIONAL CONGRESS ON DISEASES OF OCCUPATION.

THIS Congress will be held in Vienna from Sept. 21st to 26th, and the arrangements in connexion with it are now being rapidly completed. In our own country a very powerful committee has been got together for the purpose of obtaining contributions and promoting efficient representation at the deliberations. The Home Secretary, the Right Hon. R. McKenna, is Honorary President; Sir Thomas Oliver, President; whilst the members are Sir John Collie, Sir Thomas Flitcroft, Professor John Glaister, Professor Sheridan Delépine, Professor Eurich, Dr. H. Langley Browne, Dr. J. Hedley, Dr. J. Dallas Pratt, Dr. W. Hamilton, Dr. F. Shufflebotham, Dr. Herbert Jones, Dr. C. H. Milburn, Dr. T. D. Lister, and Dr. R. W. Edginton. Dr. T. M. Legge is chairman of an executive committee, to which Mr. W. F. Dearden is acting as honorary secretary. The Home Office will be represented at the congress by Dr. Legge, and various medical associations have intimated their intention of sending delegates. Discussions will take place under eight separate headings, and papers which come within the scope of any of these are cordially invited. They are: (1) fatigue; (2) work in hot and humid atmosphere; (3) industrial anthrax; (4) pneumoconiosis; (5) effects of electricity industrially; (6) occupational poisonings—lead, &c.; (7) ill-effects of occupation on hearing; and (8) general communications. Papers will be printed in the language in which they are written, with an abstract in both French and German, and the general proceedings will be published in the two languages mentioned. Contributors are therefore requested to send their matter typewritten, along with an abstract. As translations will take a considerable time papers should be sent to the general secretary, Dr. E. Teleky, Turkenstrasse, 23, Vienna, IX., on or before May 1st. The meetings will be held in the House of Parliament, and there will be an exhibition

illustrating the methods of preventing occupational disease adjacent. Although the subjects under discussion are treated from the medical aspect membership of the congress is not confined to medical men; any persons or association interested in this branch of study can attend the congress or subscribe for the proceedings. The subscription is £1. Those who wish to send in communications, attend the Congress, or take advantage of arrangements for combined travel and accommodation at a reduced rate, should communicate with Mr. Dearden at 168, Trafford-road, Salford, Manchester, at an early date.

RECENT RESEARCHES ON THE CONDITION OF THE CEREBRO-SPINAL FLUID IN NERVOUS DISEASE.

OUR knowledge of the intimate relations between certain nervous diseases and the condition of the cerebro-spinal fluid is steadily increasing, and recent investigations have served to bring some points into clearer light. It is known that normal fluid contains from 0·03 to 0·06 per cent. of albumin, which is made up of globulin and of albumose. In pathological conditions much more attention has been devoted to the globulin content than to the other, but the latter is undoubtedly often of diagnostic importance. Dr. A. Myerson, of the Taunton State Hospital, Massachusetts, discusses its significance in the March number of the *Journal of Nervous and Mental Disease*. A routine quantitative examination of the albumin content should never be omitted, though hitherto most observers have been satisfied with an investigation that does not go beyond the so-called "four reactions" (Wassermann test for the blood, the same for the fluid, the Nonne-Apelt globulin test of the latter, and the cytological condition). Dr. Myerson measures 2 c.c. of the fluid by a graduated pipette into a narrow test-tube: the fluid is then heated short of the boiling point, and 6 drops of a 33⅓ per cent. aqueous solution of trichloracetic acid are added. Normally a diffuse cloudiness appears, and after about half an hour a flocculent precipitate will have settled to the bottom of the tube, which it just covers. When there is albumin increase, however, a dense cloud appears which at once becomes flocculent, and may fill the tube to a depth of perhaps 0·5 cm. from the bottom. By employing identical quantities and tubes, and always using the same rigorously exact technique, it is easy to determine important differences between various cerebro-spinal fluids. Some of Dr. Myerson's results may be briefly alluded to. In general paralysis there is always a marked increase of albumin which is usually parallel to the globulin increase. During treatment by the salvarsanised serum method the albumin content varies to a much less extent than the Wassermann reaction, the cell count, or the globulin content, which suggests that albumin increase is a more constant sign of the pathological process underlying general paralysis than any of the other signs. In alcoholic polyneuritis and psychosis, the Korsakoff syndrome, those cases in which mental symptoms preponderate show greater increase in the albumin content than do those with more pronounced neuritic symptoms. There is in this condition a definite dissociation between the globulin and the albumin content, the former being little if at all increased. Other data are quoted which go to show that augmentation of the quantity of albumin in the cerebro-spinal fluid is an early and constant reaction in certain conditions, and the exact determination of its significance is a task worthy of neurological investigation. In a recent number of the *Nouvelle Iconographie de la Salpêtrière* Professor G. Marinesco and Dr. A. Radovici, of Bucharest, discuss the diagnostic value of the syndrome of xanthochromia and spontaneous coagulation of the cerebro-spinal fluid mentioned for the first time by Froin in 1903. By xanthochromia is meant a yellowish colouration of the fluid, due doubtless to the invasion of the subarachnoid spaces by blood pigment. Coupled with these two conditions is a third—viz., a practically normal cell count. The chief pathological states in the course of which the syndrome may occur are meningo-myelitis, compression of the cord, ascending paralysis, and generalised meningitis. In almost all the recorded cases there has been paraplegia either of spastic or of flaccid type. The level of the process may be high or low in the spinal cord. The explanation of the coagulation is to be found in the presence, in altogether abnormal quantity, of fibrinogen and fibrin ferment. These are not present in normal fluid, in which, for that matter, albuminoid substances occur only in minute quantity. It is probable that inflammation of the subarachnoid endothelium is one of the common causes of hyper-albuminosis of the fluid, but the latter may be provoked by other pathogenic mechanisms. Nonne considers that hyper-albuminosis with a normal cell count is pathognomonic of medullary compression from spinal tumour. The various pathological processes enumerated above have this in common for the production of the syndrome—that the subarachnoid spaces are invaded in such a way that a portion of the circulating fluid is isolated in a more or less closed cavity. Professor Marinesco and Dr. Radovici are of the opinion that minute capillary hæmorrhages, repeated at intervals, and an inflammatory state of the meninges are sufficient to account for the coagulation and the xanthochromia in most cases; in others—e.g., the tumour cases—toxins derived from them may irritate vascular surfaces, while stasis of the fluid favours fibrinous exudation. It is true that in cases of meningeal hæmorrhage the fluid withdrawn does not coagulate spontaneously, but the explanation is that fibrinous coagulation has already taken place at various points on the surface of the nervous system, and the fluid withdrawn has no fibrinogen in it, all of the latter having been deposited in the form of fibrin in the subarachnoid spaces.

CHANGES IN THE BASE OF THE SKULL IN PAGET'S DISEASE.

IT is a somewhat curious circumstance that since Sir James Paget's original description in 1876 of the disease which bears his name, the chief contributions to its study have emanated from continental schools. In the last number of the *Nouvelle Iconographie de la Salpêtrière* is a paper by Professor A. Léri, of Paris, which adds considerably to our knowledge of the cardinal clinical features of osteitis deformans. It has long been recognised that the disease is an osteopathy affecting more particularly the trunk, the long bones, and the cranial vault; but the idea that the condition is thus usually limited is erroneous. Alterations in the small bones of the hands and feet are far from uncommon, and Professor Léri has now demonstrated that certain changes in the base of the skull are not only constant but characteristic. His paper is based on the study of no fewer than seven cases, of which

two are personal; the other five are those whose skulls are preserved in Dupuytren's museum in Paris. Further, Professor Léri has found identical appearances in the skulls from which Sir James Paget drew his description, skulls preserved in the museum of the Royal College of Surgeons of England. The alterations in the cranial base may be present, although the cranial vault is unaffected and although the long bones may reveal no pathological changes that are clinically discoverable. In the first place, there is hypertrophy of the bones of the base; as a result, the basal foramina, both vascular and nervous, are reduced in size. There is also a constant deformation of the base; this consists in an upward projection of the bones in the immediate neighbourhood of the foramen magnum. As a result of this alteration the anterior and middle cranial fossæ are deepened, while the transverse diameter of the cranial cavity is increased. This compensatory dilatation counteracts the loss of volume sustained by the cavity from diminution of its vertical diameter, hence its cubic capacity remains practically unaltered. Radiographic examination of the skull in cases of Paget's disease will determine the regularity with which such changes occur. The posterior fossæ are relatively shallow, and the upward deformation of the base ("convexobasie") results in a sort of levelling up of the base as a whole ("platybasie"). Further, the "orbito-petrous angle" formed by the orbital plate (posterior margin) in front and the superior margin of the petrous bone posteriorly is always more obtuse in the case of Paget's disease than in normal skulls, averaging 137° in the latter and 170° in the former. With these data it may be possible to come to an accurate diagnosis, though other signs of the disease are wanting. The suggestion is made that the diminution in calibre of the various basal foramina is responsible for some of the nervous, vasomotor, and trophic symptoms that occur in Paget's disease; the deformations of the base certainly explain some of the facial and other cranial changes recognisable by the clinical observer.

OX-GALL AS AN APERIENT.

THE use of ox-bile in medicine dates back to somewhat remote times. By the earlier physicians many virtues were claimed for it, but nowadays it is rarely prescribed. It is known, however, to be a valuable cholagogue, and it is usual to administer it in capsules coated with keratin or in pills. At one time it was not uncommonly prescribed in the form of an enema as a purgative, but it is said to possess little or no advantage over soap, and latterly one seldom hears of the use of ox-gall in this form. But it is interesting to observe that in an address recently delivered before the Carlisle Medical Society Dr. William Murray referred to the remarkable aperient effects of ox-gall suppositories. They seemed, he said, to produce an easy, rapid, and effectual movement of the bowels in cases of constipation, their action being mollified by the addition of oxide of bismuth and intensified if administered in conjunction with the ordinary glycerine suppository. It would therefore appear that the aperient effect of ox-gall when administered in this form is much more pronounced than when it is applied in an enema, the explanation probably being that peristalsis is increased to a greater extent by the application of the substance in a solid form. A suitable suppository could be made with cacao butter, each suppository to contain, say, 5 grains of fel bovinum purificatum; if it were desired to produce the mollified effect mentioned by Dr. Murray 5 grains of bismuth oxide could be incorporated in each suppository. On the other hand, if it were desired to produce the intensified effect a suppository could be prescribed containing 5 grains of purified ox-gall with glycerine suppository as the base.

SPONTANEOUS RUPTURE OF THE TYPHOID SPLEEN DIAGNOSED AND TREATED SUCCESSFULLY.

THE operation of splenectomy has attracted a good deal of attention in recent times, and it is now possible to enumerate quite a formidable list of recognised indications for its performance. It is not altogether to be wondered at that these lists do not usually make any allusion to rupture of the typhoid spleen as one of the conditions in which excision of the offending organ is imperatively demanded, for it appears that this accident has only been recorded 13 times, and in nine of these as a surprise at necropsy. Four times it has been discovered during life, in three of these cases at an operation undertaken for supposed intestinal perforation, while in only one has a correct diagnosis been made and a successful splenectomy performed. The fortunate patient in this last case was a medical man aged 36, who came under the care of Dr. Lewis A. Conner and Dr. W. A. Downes in the New York Hospital, with a diagnosis of probable typhoid fever. He had been ill a week, and the day following admission was suddenly attacked by severe pain in the left hypochondrium and left shoulder. This was accompanied by vomiting with collapse; the left hypochondrium was rigid and tender, and the splenic dulness increased in area. The patient rallied for a day or two from these serious symptoms, the cause for which was not obvious, especially as at this time the Widal reaction was still negative. Two days later, however, the same symptom-complex reappeared with manifold intensity. The left side of the abdomen and the left flank were dull, but the rest of the abdomen was soft and the liver dulness was normal. A consultation resulted in a diagnosis of ruptured spleen, and the blood was examined to see whether it gave any indications of severe internal hæmorrhage, but without any positive result. However, an immediate laparotomy was performed, the first discovery being the presence of a large quantity of fresh and clotted blood (one and a half to two quarts) in the peritoneal cavity. The spleen was seized and delivered through the incision (a vertical one down the middle of the left rectus muscle), a large rent being found in its capsule along the posterior border. The pedicle was tied off, the spleen removed, and the abdomen closed rapidly. The operation, which was undertaken less than six hours after the onset of the second bout of symptoms, occupied no more than 20 minutes. The patient recovered well from the laparotomy, and the fever ran a normal course, though there were evidences of median basilic thrombosis with pulmonary infarction. There was a temporary anæmia with leucocytosis following the operation, but the blood picture gradually returned towards the normal. The excised spleen displayed nothing of note apart from a laminated clot on its diaphragmatic surface, of such an age as to support the belief that the first bout of acute abdominal symptoms was due to a rupture of the spleen prior to that which was the immediate occasion of the laparotomy. It is

suggested by Dr. Conner and Dr. Downes that this second rupture was caused by coughing. It seems, therefore, that spontaneous recovery from rupture of the typhoid spleen is conceivable. This extremely interesting case, which is reported fully in the *American Journal of the Medical Sciences* for March, with a summary of the other cases referred to, constitutes a true advance in the art of healing; for the first time rupture of the typhoid spleen has been correctly diagnosed, and the patient's life has been saved by a timely splenectomy.

THE committee of the Cambridge Research Hospital is making a special effort to raise an endowment fund of £10,000, and the executors of the late Sir William Dunn, Bart., have, after giving special consideration to the needs and work of the hospital, sent a donation of £2500.

PLEA FOR AN INTERNATIONAL ANATOMICAL TERMINOLOGY BASED UPON THE B.N.A.

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THE present state of anatomical terminology in Britain is deplorable in the extreme. The German speaking anatomists, realising the importance of uniformity, spent much time and money in evolving for themselves a Latin nomenclature which since it was adopted in 1895 by a conference at Basle is known as the Basle *Nomina anatomica*, or for shortness the B.N.A. Although the B.N.A. was primarily intended for the use of the German speaking nations its authors hoped that it would in course of time be possible to "gain the coöperation of anatomists speaking other languages" and so to obtain a truly international terminology. In Britain, however, the B.N.A. had a chilling reception. This might have been excused had the British anatomists only taken the trouble to revise their own terms and evolve a uniform system for their own use. To this day the British nomenclature remains in a state of anarchy, and the anatomists are now divided into three camps: first, those who hold fast their faith in the national terminology and ask only to be left in peace; secondly, those who have become converts to the B.N.A. and would force it upon their brethren by the sword; and lastly, those who believe that there is much to be said on both sides, and are earnestly seeking a compromise. Each disputant sees the good in his own system and the bad in those of his rivals. Each demands what he himself does not think of giving—namely, a statement of guiding principles. This miserable dispute will never be settled by a comparison of details. A definite standard is needed for testing the rival systems. Principles must be formulated which will command universal respect and which, when applied to the details, will automatically winnow out the chaff and leave the corn. The British terminology is based upon no definite principles, and as for the B.N.A., if the statement of its principles given by Professor L. F. Barker, of Johns Hopkins University,[1] is even approximately correct, its authors must have thought, and many will agree, that such principles are almost as much honoured in the breach as in the observance.

[1] Anatomical Terminology, with Special Reference to the B.N.A., by Lewellys F. Barker, Professor of Medicine, Johns Hopkins University, Baltimore (formerly Professor of Anatomy, Rush Medical College, University of Chicago).

An international terminology is a real necessity, and for this purpose there is nothing in existence to compare with the B.N.A. If little or nothing is here said of its merits, that is solely because they are, or at least by this time ought to be, sufficiently well known. The supreme defect of the B.N.A. is its lack of motive power to induce everyone to accept it even as a code. No international nomenclature can possibly command universal respect and be universally accepted unless it is broadly based upon sound and well-defined principles. Its language must be international and its terms both perfectly precise and strictly relevant. If it is to be comprehensive and concise, to be illuminating, or even, in some instances, merely intelligible, it cannot entirely dispense with duplicate terms. In each country the international terms may be employed unchanged, they may be nationalised in form, or they may be replaced by previously existing national equivalents. Though always equally lawful such synonyms will seldom be equally expedient.

Language.

For an international anatomical nomenclature Latin is without a rival, but to insist on Latin only or on Latin of a high order is sheer pedantry. It is futile to demand that "each term shall be in Latin and be philologically correct," and Professor Barker is manifestly blinded by admiration when he declares of the B.N.A. that "all the terms are in correct Latin." "Ventriculus" is Latin, "hepar" Greek, and "mesorectum" both and neither. Is it really worth while straining out gnats when whole troops of camels must be swallowed? It is indeed a sign of health in the B.N.A. that so little attention is paid to the *muscae volitantes* of philology.

Precision.

In these days when stars are accurately weighed in the balance and their distances measured with precision, is it too much to ask that a scientific terminology shall be precise and self-consistent? How many of the "nervi cerebrales" of the B.N.A. are in any sense cerebral? These nerves are attached to the brain and spinal cord, and they pass to and fro through foramina on the one hand in the cranium, on the other in the spinal column. It is convenient to distinguish between the two sets of nerves, and the British terminology quite accurately divides them into the "cranial" and the "spinal" nerves. In the B.N.A. the cranial nerves are termed "nervi cerebrales," which is obviously incorrect, since although the so-called cerebral nerves are all connected with the brain, the brain as a whole is not the "cerebrum" but the "encephalon." To quote Cunningham's Manual in a slightly modified form, "*No fewer than eight of the*" 12 "*cerebral nerves have a superficial attachment,*" not to the cerebrum, but "*to the ventral part of the hind-brain which is formed by the medulla and the pons.*" During a recent discussion in the Anatomical Society of Great Britain and Ireland an eminent London anatomist proclaimed his unconquerable aversion to "the cerebral nerves." On what principle is he or anyone else to be condemned to employ a term so inaccurate? Again, in the B.N.A. the abdomen includes the abdominal wall as well as the abdominal cavity. How, then, can the exit from and the entrance to the inguinal canal be contrasted as the "annulus inguinalis subcutaneus" and the "annulus inguinalis abdominalis"? Again, the mesentery is generally agreed to be the *μέσον*, or middle thing, the medium or means by which the *ἔντερον*, or intestine, is attached to the posterior abdominal wall, yet its

constitution and relation to the gut when they are not left to the imagination are variously described. If an international terminology is not to be a farce such diversity and vagueness must be made impossible. Each term (e.g., mesenterium) must have a definite content and neither it nor its national equivalents (e.g., mesentery, *mésentère*, and so on) must be used in any but the international sense. Certain British text-books are pluming themselves on their faithfulness to the B.N.A., but the strictest of the sect frequently ignore it both in principle and in detail. They speak of "the superficial fascia," "the frontal operculum," "the seventh cerebral nerve," "the innominate artery," "the pelvic girdle," and so on, whereas the most careful dissection of the B.N.A. reveals only "panniculus adiposus," "pars triangularis operculi," "nervus facialis," "arteria anonyma," "cingulum extremitatis inferioris," &c. It cannot be too strongly insisted on that the international nomenclature shall be precise and self-consistent and that the national terms shall precisely and consistently correspond to their international equivalents.

Relevance.

Professor Barker gives it as a principle of the B.N.A. that "the terms shall be merely memory signs and need lay no claim to description or to speculative interpretation." Anatomy, it is true, contains many excellent terms of this character. The term "aorta," for example, could scarcely be replaced, yet how many ever trouble themselves over its origin and meaning? But although in certain cases the terms "need lay no claim to description or to speculative interpretation," they will, for the most part, be all the better even as "memory signs" if they are truly descriptive and can be readily interpreted. The B.N.A. itself to some extent recognises this, for Professor Barker states a further principle that "related terms shall, as far as possible, be similar—e.g., femur, arteria femoralis, vena femoralis, nervus femoralis." What is this but descriptive nomenclature clamouring for interpretation? The crux of the matter is that everyone desires not a mere code, but a terminology as far as possible descriptive and suggestive, and whereas unanimity might soon be attained were it only a question of labelling for identification, when it comes to description and suggestion it is *tot homines tot sententiæ*. In Britain the "appendix" has long been associated with the "mesappendix" and the "appendicular artery," whereas the B.N.A. has the terms "processus vermiformis," "mesenteriolum processus vermiformis," "arteria appendicularis." The latest edition of Cunningham's text-book, without a vestige of authority, replaces "arteria appendicularis" by "the artery of the vermiform process." If the B.N.A. is not to be rigidly adhered to, how much more simple, concise, and suggestive would be "vermiform appendix," "mesappendix," and "appendicular artery." This would also harmonise with the usage of pathology, medicine, and surgery, whereas no wormlike process of mental wriggling could ever lead one from the processus vermiformis to a catarrhal appendicitis or an appendicular abscess. Again, some anatomists speak of the "spinal," others of the "vertebral" column, some of the "gastro-hepatic," others of the "lesser" omentum. Which of these equally correct and equally suggestive terms are to be sacrificed to the fetish of international monotony? Though the recent adoption of the B.N.A. in certain British text-books has served the useful purpose of bringing matters to a head, such isolated action rather suggests the policy of the "big stick." Uniformity is never worth having by coercion or grudging concession. "Cabin'd, cribb'd, confin'd" within a monotonous nomenclature the living spirit of anatomy will incessantly chafe at its bonds. Not reluctant uniformity but real unanimity is the goal, and this can be attained only by the guidance of principles so definite that they will in every case unerringly lead either to the willing rejection of one term or to the willing retention of both.

Duplicate Terms.

Advocates of the B.N.A. insist upon what Professor Barker gives as one of its principles—namely, that "each part shall have only one name." Such a principle must have originated from a misconception of the functions of a nomenclature. In actual description duplicate terms, far from confusing, often throw valuable light upon a subject, and it is a mistake to suppose that they must be rigidly excluded from an international terminology which after all is scarcely a romance to be read through at a sitting. In the first place, *every structure should have as simple and natural a name as possible, but where this is long or cumbersome a shorter and more convenient name may be added.* Thus the peritoneal fold associated with the epigastric artery should be "plica arteriæ epigastricæ," and also as in the B.N.A. "plica epigastrica." Similarly the groove which lodges the transverse sinus should be "sulcus sinus transversi" and also as in the B.N.A. "sulcus transversus." The shorthand terms, however convenient, can never displace the longer ones. Though the groove for the transverse sinus may be called the transverse groove, is not the transverse groove the groove for the transverse sinus? Secondly, *in certain cases it would for linguistic reasons be simpler and more straightforward to recognise two names for a single structure even where common usage lays and will continue to lay the emphasis entirely upon one*—e.g., "testis (orchis)," "ventriculus (gaster)," cf. B.N.A. Only in this way do numerous compound terms become intelligible—e.g., mesorchium, gastro-hepatic. In the case of the tongue, "lingua (glossa)," we have the lingual artery, veins, and lymphatics, the sublingual salivary gland, the lingual, glossopharyngeal, and hypoglossal nerves, and the hyoglossus, stylo-glossus, and genioglossus muscles. If this principle is not to be admitted British anatomists must be prepared to resign many of their favourites. Can the terms "fibula" and "peroneal artery," for example, be defended in face of the fact that in France the corresponding terms are "la péronée" and "l'artérie péronéale"? Lastly, and most important of all, *a structure may well have more than one name when it belongs to more than one class or has more than one important relation.* The mesenteries, omenta, and ligaments so resemble each other in constitution that they may conveniently be all classed as ligaments. Certain of these ligaments in relation to the stomach may then be grouped together as omenta, and the omenta themselves grouped in relation to the stomach curvatures. In this way the present British terminology of the omenta can be reconciled with the B.N.A. and both can be retained. Again, the B.N.A. assigns to each so-called cerebral nerve a special name—e.g., "nervus trigeminus," "nervus facialis." Cunningham's Manual has therefore no authority to number these nerves "fifth cerebral nerve," "seventh cerebral nerve," and so on, however valuable this numbering

may be. Indeed, the strongest argument in favour of legalising occasional duplicate names is the fact that the most virulent admirers of the B.N.A. smuggle them in whenever it suits their purpose. The more stringent the law the brisker will always be the traffic in such illicit but perfectly justifiable terms.

In the international nomenclature the details should be determined not by ballot, as in the B.N.A., but by the application of well-defined principles. If precision and relevance were insisted on, and if duplicate terms were admitted where they were really valuable, many terms now in dispute would immediately be either accepted or rejected unanimously. Where immediate unanimity proved to be impossible synonyms should in the meantime be inserted. Any other form of nomenclature, instead of embodying the living spirit of anatomy, would be only a sepulchre, outwardly fair with the whitewash of uniformity, but full within of the bones of terms from which life had long since fled.

Relation of the International Terminology to the National Language.

Until Latin becomes the international language of science, anatomists will continue to speak and write each in his mother tongue. What, then, should be the relation of the international terminology to the national language? The greatest confusion prevails in present practice, for though all are agreed that the international terminology should be employed at least as a code, some apparently wish to introduce it into, others to exclude it from, the body of the text. It is important, therefore, to have the guidance of definite principles. 1. Since the scientific literature and teaching of each nation are primarily for national use, *national terms may be employed provided always that these are clear and precise in themselves, and that they do not render the transition to the international terminology obscure or difficult.* It would detract seriously from the value of an international nomenclature if in English textbooks terms such as "body, head, neck, limb, arm, forearm, hand, eye, ear, nose, kidney, stomach, heart, lung," and so on, were to be replaced by "corpus, caput, collum, extremitas, brachium, antibrachium, manus, oculus, auris, nasus, ren, ventriculus, cor, pulmo," &c. Many of the general terms which occur in the B.N.A. and which may accordingly be regarded as necessary for an international nomenclature are already current in the English language, some in Latin form—e.g., "area, isthmus, nucleus, stratum"—but the majority in a form more or less Anglicised—e.g., "muscle, nerve, process, fibre, membrane, column, space, vestibule." 2. *Where the international terms have no suitable national equivalents they may be introduced into the national nomenclature either in a nationalised form*—e.g., "commissure, decussation, clavicle, tubercle, prostate"—*or in the original "Latin"*—e.g., "perichondrium, ependyma, canaliculus, fornix, crus, stria, scapula, omentum, corona, trabecula, foramen." Professor Barker gives at least one English "synonym" for each term in the B.N.A., among them being "Berry, little head of the spoke, small piece of flesh, large hole, thread, ditch, skein, seam, round swelling, little beam, crevice, shaggy hair, whirlpool." Such synonyms are tempting, but one is duly warned that "in many instances it would be unwise to use the English synonym given."

The relation of the international terminology to the national languages may well be regulated by principles such as have been given above. These principles are applicable to all terms, whether Latin or Greek, simple or complex. They allow the utmost freedom in the choice of national terms, for in every case the international term may be employed unchanged, it may be nationalised in form, or it may be replaced by previously existing national equivalents. One may, for example, speak of the fasciculus longitudinalis, or the longitudinal fascicle, or the longitudinal bundle, or, again, of the extremitas sternalis claviculæ, or the sternal extremity or sternal end of the clavicle. No national term will be lawful which is not the precise equivalent of the international, but not every lawful equivalent will be expedient. The terms actually chosen will depend on many circumstances, and nothing will test the good sense of the individual anatomist more than the use which he makes of the international terminology. However fastidious he may be he will have little cause for complaint. He may delight in the long "head" of the triceps and the "caput" cæcum coli, in the "neck" of the femur and the "cervix" uteri, in the "body" of the sphenoid and the "corpus" callosum, in the "tail" of the pancreas and the "cauda" equina. He will trip lightly from the "back" to the "dorsum" sellæ, from the "arm" to the "brachium" conjunctivum, from the "leg" to the "crus" of the diaphragm, from the "foot" to the "pes" hippocampi, from the "ear" to the "auricle" of the heart, from the "stomach" to the "ventricle" of the brain, from the "hammer" to the tibial "malleolus," from the "fibula" to the "peroneal" muscles, from the facial "canal" to the "canaliculus" of the cochlea. The sphenoid may spread its great "wings," and the cerebellum display its "alæ." He will not fear the "cornua" of the hyoid, neither will he flee from the "horns" of the ventricle.

Conclusion.

This paper deals in a very cursory and tentative manner with some of the difficulties in the way of an international terminology, but it will have accomplished its object if only it succeeds in placing the B.N.A. in its proper perspective. Though the B.N.A. has been long neglected in Britain, indifference to international nomenclature is in these days the hall-mark of the indifferent anatomist. Much more creditable is the active hostility which prevails in so many quarters. A recent discussion in the Anatomical Society gave rise to a striking display of deep-rooted and apparently ineradicable antagonism not untinged with scorn. It is indeed tempting to throw stones at the B.N.A., but its opponents ought first to see to their own house. In 1895 the B.N.A., with admirable simplicity and precision, termed the space within the septum pellucidum of the brain "cavum septi pellucidi," yet to this day in Britain the space is often spoken of as "the fifth ventricle," partly doubtless because it is not a ventricle, partly perhaps because if it were it could not possibly be the fifth. If there is such difficulty in replacing in Britain so inaccurate and misleading a term as "fifth ventricle" by one so simple, descriptive, and accurate as "cavity of the pellucid septum," would it not appear a superhuman task to induce anatomists throughout the world to accept a whole nomenclature? But however much the B.N.A. may have suffered from indifference and from active hostility it has far more to fear from blind admiration and undiscerning praise. Some anatomists in

America and in Britain appear to have persuaded themselves that they have adopted and are consistently employing the B.N.A. A single example will show on what uncertain ground they stand. The B.N.A. contains the terms, "Cingulum extremitatis inferioris, os coxæ, os ilii, os ischii, os pubis," for which Professor Barker gives the equivalents, "Pelvic girdle, hip bone, ilium or flank bone, ischium or bone of the hip, pubic bone." It is clever jugglery to swallow "cingulum extremitatis inferioris," and then to reproduce it as "the pelvic girdle." The "os ilium," too, is the bone *of the ilia* or the iliac bone, the "os ischii" the bone *of the ischium* or the ischial bone, and the "os pubis" the bone *of the pubes* or the pubic bone. On what authority, then, does Professor Barker employ the terms "ilium" and "ischium," or Cunningham's Manual and Text-book the terms "ilium," "ischium," and "pubis," or the Companion to Manuals the terms "os ilium," "os ischium," "os pubes"? Those who are inspired by the sublime ideal of a "correct Latin" nomenclature should strangle such monsters at the birth. "Ilium," "ischium," and "pubis" are extremely convenient shorthand terms and ought to be officially adopted, but they cannot consistently be employed by any follower of the B.N.A., who will admit no duplicate terms, and who is either unwilling or unable to recognise that these coins from the anatomical mint are not current in the realm of "correct Latin."

To maintain that the B.N.A. is perfect or that even if imperfect it should at once be adopted to the exclusion of the present British or any other terminology can only alienate sympathy. Though the B.N.A. embodies all the enthusiasm and learning of a bygone generation of German-speaking anatomists its authors were under no delusion as to its real worth. As Professor Barker says, they realised that it was wiser "not to make the undertaking too wide at the beginning, to try rather to form a list of terms which should in the first place be acceptable to German-speaking anatomists, and later on to attempt to gain the coöperation of anatomists who speak other languages." Unwise admirers of the B.N.A. are clamouring for its immediate universal adoption *in toto*, but it is more in accordance with the genius and foresight of its authors that anatomists of every tongue should now "coöperate" in producing a nomenclature at once more precise, more complete, and more truly international. Should such a nomenclature be obtained it will be necessary for all anatomists whole-heartedly to abide by it, both in principle and in detail. No one should be allowed to play fast and loose with it after the present manner of the advocates of the B.N.A. Should the time not be ripe for an international nomenclature based upon the B.N.A., British anatomists ought at least to revise the terms at present in use throughout Great Britain and Ireland, and to evolve a national system as far as possible in harmony with the Basle terminology.

LITERARY INTELLIGENCE.—In response to many applications for information as to "How to Start a Day Nursery" the National Society of Day Nurseries is about to issue "A Handbook on Work in the Public Day Nursery," which will include the annual report of the society, price 1s. The information is gathered from 65 affiliated day nurseries scattered throughout London and the United Kingdom. Copies may be obtained from the secretary, 4, Sydney-terrace, Fulham-road, S.W.

ELEMENTARY TRAINING OF CHILDREN

TO REMOVE MENTAL FAULTS AND LESSEN MENTAL DEFICIENCY.

BY FRANCIS WARNER, M.D. LOND., F.R.C.P. LOND., F.R.C.S. ENG.,

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WHEN a child is brought to the doctor for examination and advice on account of some mental faults, backwardness, or deficiency, a diagnosis should be made upon which a scientific prognosis can be given, and a line of treatment recommended. At the same time such concomitants as naso-pharyngeal obstructions, deafness, errors of refraction, defect of the heart, and other physical defects, should be eliminated as possible causes of brain inaptitude. It is also desirable before giving an opinion to ascertain as much as possible of the child's surroundings, habits, and previous training. Our aim in all these cases should be to train each normal character of brain action, stage by stage, on a definite plan according to the age of the child and his increasing brain power, while implanting in the teacher's mind a clear idea of their useful employment for social and mental life in the future. The work wanted from the teacher is often difficult and laborious, but interesting, and needs our guidance at each stage with directions what to observe and what to do, with assistance in overcoming individual difficulties, and using each degree of brain power gained in order to make it useful.

There are many points in elementary training that may be used in all cases, whether for the treatment of mental faults in a good brain or in a case of mental deficiency; but while in the former beneficial results may soon be achieved, in the latter long-continued perseverance is necessary to produce visible results. Among mental faults that may occur in well-made brains (psychoses) examples are as follows: "inaccuracy" in reading and in arithmetic from imperfect training in eye movements; "forgetfulness" from imperfect sensory impressions by sight or hearing; "mental confusion," specially on auditory stimulus, so that the child is excited by a sharp question or command, and better controlled by teacher's look or gesture, as is often the case with stammerers; forgetfulness may also be due to fatigue. Dulness in response may be due to partial deafness. Laziness in mental work is in some cases remedied by active drill and manual occupations.

Methods of Training.

I do not here deal with these faults in detail, but pass on to methods in training useful in the treatment of such conditions from which selection may be made suitable to the individual case, while all must be perseveringly employed for the defective child. When we have a well-made brain partially out of working order, the special training may soon effect good results and be replaced by ordinary educational teaching; but in cases of congenital defect the special training must be carried on daily till better aptitude is built up in the brain, while the whole day is occupied under control. Defective children who have previously been left unoccupied or "at play" without any systematic endeavour to control their brain power by a healthy mind are almost always

improved by establishing organised methods of dealing with them, however feeble their powers may be at first. Systematic training of the defective child may commence by gradually accustoming him to the erect position of the head, which is favourable for movements of the tongue, lessens dribbling, enables him to see around, and gets him ready for articulation. Vocalisation in any degree should be encouraged. The child should be trained to move his eyes; get his eyes to follow without head movement an object held by the teacher, or a lighted match moved vertically and horizontally slowly and equally. This is followed after practice by seeing accurately what is shown in observing teacher's mouth when teaching speech and in imitating her movements; it is the first training in "attention," and will be used later in counting at sight. Exercises in imitation of movements seen should be practised daily, they afford the best method of producing temporary brain coördination when words are not understood. The child will at first probably only repeat the teacher's movements of the arm at the shoulder and elbow; when more advanced, movements of individual digits, one at a time, may be imitated with increasing accuracy, and still later in combinations of two or three fingers at a time. A straight balance of the hand, with all digits in the same plane, should be taught to children more advanced. In these exercises of coördination the pupil sees the teacher's movements, and the nerve centres in his brain, which correspond respectively to those in action in the teacher, are stimulated to activity in the same order and relations in time, thus giving us the power of coördinating his brain as may be desirable. Such training is very useful in overcoming neuroses, and lessening the uncontrolled spreading extra-movements which often accompany stammering. The movements of fingers used in writing, in catching a ball, or using a spoon, as well as pronation and supination, can thus be taught.

Exercises to Produce Muscular Tension.

When any action under control can be obtained means should be taken to produce muscular tension as well as movement; any controlled action produces some brain coördination, but when the action overcomes a resistance the muscular tension resulting not only promotes muscular growth, but also, I believe, sends a useful stimulus from the muscle to the brain, tending to increase its healthy growth. The muscles of the legs are usually better developed in normal children than those of the arms, owing to the tension thrown upon them by the weight of the body; defective children are usually subnormal in weight, so that less muscular work is necessarily spent in walking; they often take long walks without much muscular work done or fatigue. If the child carries weights in his hands, or a satchel on his back with, say, 3 lb. in it, more muscular work is done in walking a mile; weights of 1–3 lb. may be carried round the room, and heavy bricks or logs substituted for toys in the nursery. Children are often lazy, real work does them good, it helps to improve digestion, removes constipation, and prepares the pupil for the gymnasium and manual work. When an exercise is fairly well performed it should be practised with a resistance to the movement to produce muscular tension. Thus, when movements of the head are made to command, the same effort to action while the teacher holds the head with her hands brings the muscles into strong play; exercises for the muscles of the jaw and those of the hands I described recently. Accustoming the child to look at near and at distant objects improves the muscular apparatus of accommodation, with development of the sense of distance. The sense of muscular tension is very useful in producing mental aptitude in making comparisons, appreciation of the use of numbers, and subsequently the value of coins by their relative weights, also an understanding of arithmetical addition and subtraction with other employments of figures. Thus, before the pupil has ability to count or express what he feels he may be trained by muscle sense; let him hold in his hand weights of ½ oz., 1 oz., 1½ oz., 2 oz. in succession and feel the weight without the size; after practice he may be able to express the numbers corresponding to each weight he has felt in increasing series and understand the relations of numbers.

Training in these and other motor exercises after some months of daily practice leads to a great increase of mental ability and controllability in a defective child, with better sleep and health. The increasing mental aptitude should be used in making comparisons and expressing them while trying to educate the pupil in observation. In many other ways which there is not space for me to describe here we can make sensory impressions without words to be called into reactivity later and used in making observations and inference as experience is gained stage by stage. Verbal control, the use of words, and some understanding are usually evolved sooner than self-helpfulness. Well-planned educational training on the lines indicated thus briefly does much to evolve mental faculty in the brain and remove mental faults.

London Hospital.

MEDICINE AND THE LAW.

The Court of Criminal Appeal and Verdicts of Insanity.

AN important judgment was delivered recently in the House of Lords by Lord Reading upon the question whether a person tried upon indictment for a crime and found by a jury to be "Guilty but insane" can appeal against that verdict to the Court of Criminal Appeal. In the case before their lordships a man named Felstead had been indicted for feloniously and maliciously wounding his wife, and had been found guilty but insane when he committed the act proved to have been done by him. He had been ordered in the ordinary way to be detained during His Majesty's pleasure, and presumably he appealed because, being able to appreciate his position, he would have preferred a fixed sentence of imprisonment to detention for an indefinite period in a criminal lunatic asylum. The Court of Criminal Appeal held that it had no jurisdiction to entertain the appeal, because the Criminal Appeal Act, 1907, only entitles it to hear appeals from persons "convicted on indictment," and because it considered that a person had not been so convicted against whom the special verdict of "Guilty but insane," under the Trial of Lunatics Act, 1883, had been recorded. The House of Lords agreed with this decision, Lord Reading tracing in an exhaustive judgment the history of the law with regard to the trial of insane persons. The law, to put it briefly, has developed on the following lines: In earliest times a prisoner found to have been insane when he did an otherwise criminal

act was not acquitted, but was the subject of a special verdict giving him the right to pardon. At a later period, in similar circumstances, he could either be found not guilty or could receive judgment of the court acquitting him after a verdict had been returned that he was *non compos mentis*. As this procedure might involve the release of a dangerous lunatic, an Act was passed in 1800 "for the safe custody of insane persons charged with offences," so that the special finding of the jury at that time amounted clearly to an "acquittal on account of insanity," while the new Act empowered the court to order the accused to be detained in safe custody. Later still, in 1883, the Act now in force was passed, which does not otherwise change the law, but orders that a jury, if satisfied that the person did the act but was insane when he did it, must find a verdict to that effect. Lord Reading, in addition to tracing the law directly affecting the insane, further referred to the necessity for finding "malice" and a "felonious" wounding as essential to "conviction" in the case before the House, and came to the conclusion—which, it will be seen, was a logical one and strictly consistent with the historical development of the law—that the special verdict referred to is not a conviction upon indictment, and consequently is not one which the Court of Criminal Appeal can review. The question of the treatment of insanity by the law is a difficult one, and one which has led to considerable argument and difference of opinion upon various occasions. It is evident, moreover, that its present condition is not altogether satisfactory, as in the case referred to above, if the Court of Appeal had held that it had jurisdiction, and further that the verdict of the jury was wrong as to the insanity of the accused, there would have been no verdict against him upon which he could be punished.

Two Decisions under the Workmen's Compensation Act.

Two recent decisions under the Workmen's Compensation Act may be briefly referred to, not so much on account of any medical interest attaching to them, as on account of their showing the wide scope of the Act and the manner in which responsibility attaches to employers where death in and arising out of employment takes place. In the first case the application was on behalf of Thomas Lloyd, a posthumous illegitimate child alleged by the mother to be the son of Whittall, a workman killed by an accident. The mother further stated that Whittall had promised to marry her when she told him she was pregnant. It was held by the House of Lords, reversing the decision of the Court of Appeal, that her evidence as to what the father said was admissible to prove the child a dependent. The case may be noted as one of a class in which a statement made to a medical man attending a person dying of accidental injuries might become of importance in establishing the claim of a survivor. The second case was that of John Kelly, the young Irish schoolmaster who some little time ago was beaten to death by a number of lads in an industrial school at Trim. The mother of the deceased claimed compensation as a dependent, and the Meath county court judge held that the occurrence was an accident arising out of and in the course of the employment of the deceased within the meaning of the Act. It was contended on the other side that the result of a crime deliberately perpetrated by others could not be an accident. The Court of Appeal in Ireland was of opinion that the county court judge was right, and the House of Lords has now upheld this decision, but by a majority of one only, Lord Dunedin being strongly of the other opinion and having the support of Lord Atkinson and Lord Parkes. The Lord Chancellor, Lord Loreburn, Lord Shaw, and Lord Reading held that the appeal should be dismissed. The importance of the case to those serving in employments in which they may be exposed to personal violence is obvious.

PUBLIC HEALTH OF LONDON IN 1912.

BY resolution of the London County Council, which took effect at the beginning of 1912, the duties of medical officer of health were combined with those of education medical officer, the Council having decided that the whole of the school medical work, including the inspection and treatment of children, should be placed under the direction of the county medical officer of health. Accordingly, the complete reorganisation of the central health department has been decided upon, a large number of administrative changes, to which reference will presently be made, having been already accomplished. We have received Vol. III. of the Council's recently issued annual report, which contains the report of the county medical officer of health and school medical officer for the year 1912.[1] Although the section on vital statistics in the annual report for 1911 had been contributed by Dr. W. H. Hamer, the present is his first complete report as county medical officer of health and education.

Having carefully read this volume we regard it as a valuable extension of the series of reports for which State medicine is indebted to Dr. Hamer's eminent predecessor, Sir Shirley F. Murphy. As the work abounds with matter of supreme importance to all who are interested in sanitary progress, and especially to students of preventive medicine, we regret that limitations of space prevent the inclusion, in the present review, of more than a bare outline of its contents. But we trust that as the volume has been placed on sale at a remarkably low price, its perusal by the majority of our readers will be ensured.

The subject matter of the report is arranged thus: Part I. deals with vital statistics and sanitary administration, and Part II. is devoted to elementary education in its medical aspects.

PART I.—(A) VITAL STATISTICS.

The recent movement of the London population is remarkable, inasmuch as, for the first time on record, it has experienced a decrease in the course of the last intercensal period. During the 100 years ending with 1901 there had been, in round numbers, a growth from 959,000 to 4½ millions, although since 1881 the rate of increase has declined from 17·4 to 7·3 per cent. Concurrently with a decline of 0·3 per cent. in the population of the London County since 1901 the "outer ring" has shown an increase amounting to 33·5 per cent., the rate of increase in the whole of England and Wales having averaged 10·9 per cent.

Still Falling Birth-rate.

The steady decline in the London birth-rate recorded in previous reports has continued, and the rate for 1912 (24·5 per 1000) is the lowest recorded in London since the institution of civil registration. The causes of this continuous fall in the birth-rate have long been, and still are, the subject of serious controversy. In the present report Dr. Hamer discusses the question at considerable length, but the grounds on which his conclusions rest do not readily admit of summary. It must suffice to quote his provisional opinion that "there is much to be said in favour of the view that the fall is in the main a natural one, and represents the adjustment brought about by the ordinary laws which affect movement and growth of populations." In comparing the birth-rate of the metropolis with that of other great English towns Dr.

[1] Published by P. S. King and Sons. Folio pp. 235 + lxxiv. Price 2s. 6d.

Hamer remarks that "the London figures alone are fully corrected by the exclusion of births within the county to mothers not usually resident in London." He ventures the opinion that if the births in other towns were similarly corrected considerable modifications of the published birth-rates might result. The decrease in birth-rate prevailing in London is shared by all the foreign capitals; indeed, the London birth-rate compares not unfavourably with that of the largest among them. But inasmuch as there exists much difference in practice as to the allocation and registration of births in foreign towns, the rates locally recorded must be regarded as only approximately comparable.

London Life-table 1901–10.

For the purpose of comparing the health conditions of different communities the use of uncorrected or crude death-rates is generally condemned as fallacious by modern sanitarians, who recognise in the life-table method a trustworthy expedient for eliminating errors due to differences in the age constitution of the populations compared. The first extended life-table for London was published by Sir Shirley Murphy in his report for the year 1901, and was based on the mortality experience of 1891–1900. The present life-table is the second of the series, and its value is enhanced by the fact that the methods of construction of both tables being the same their results are strictly comparable. This table, which is illustrated with appropriate diagrams, may usefully be preserved as exemplifying a simple but effective method of construction, the details of which were fully described in the report above referred to. Compared with its predecessors, the present life-table indicates that the expectation of life has increased, in the case of males by 5·76 years, and in the case of females by 6·06 years. From data in the text it would appear that in recent years changes, greater than any that can be accounted for by causes ordinarily assigned, have taken place in the constitution of the London population. These changes are believed to be due mainly to the marked outward movement of the inhabitants over the county boundary, and, as far as the earlier ages are concerned, to the diminution in the birth-rate since the "eighties."

London Mortality in 1912.

In the year under review both the death-rate from all causes (13·6 per 1000 living) and the infantile mortality (91 per 1000 births) were the lowest hitherto recorded. In the annual report for 1901 the life-table method was indicated as the best known means of estimating the effect on a community of fluctuations in mortality. In order to apply this method the mean future lifetime of males and females at definite age-groups must first be obtained from a life-table. This has been done in the present instance, and in an instructive table the number of deaths occurring in the year 1912 is compared with the number that would have occurred had the death-rate prevailing in the previous decennium been maintained throughout that year. The number of lives gained in the latter period is also shown, and the figures given express this gain in terms of "life capital"—this being obtained by applying the mean future lifetime figures to the number of lives gained at each age-group. From this table it appears that during the year 1912, as compared with the decennium 1901–10, there has been a saving of not fewer than 10,065 lives, representing a gain to the community of 487,455 years of "life capital."

Infantile Mortality.

The profound and growing interest now concentrated on the subject of infant life protection is due to a general recognition of the teaching of vital statistics that much of the prevailing waste of infant life is preventable. For the last seven years medical officers of health have been required to furnish to the Local Government Board returns of mortality in successive weeks and months of the first year after birth. In London effective use is made of these returns. An instructive table appears in the present report showing the effect of social conditions on infant mortality as it obtains in five groups of London districts. The figures for 1905–11 show that in each successive trimester of the first year of life the difference of mortality in the several district groups becomes more pronounced. If, for example, the mortality at ages 9 to 12 months in the districts of "highest social condition" be taken as 100, the rate in the lowest social districts will be represented by 235.

Mortality from Specified Causes.

From the section on epidemic diseases it appears that the mortality from small-pox, measles, whooping-cough, and scarlet fever was below the quinquennial average. The incidence of the notifiable infectious diseases also showed considerable abatement. The question of enteric fever causation has always received much attention in these reports. In the year under notice no mention of exceptional prevalence of this disease has appeared in any of the district reports. In the county of London only 704 cases were notified during the year, or 318 fewer than in the preceding year. As illustrating the difficulty of diagnosis frequently experienced, it is important to notice that "the cases certified to be enteric fever and admitted to the hospitals of the Metropolitan Asylums Board, but in which the diagnosis was not subsequently confirmed, constituted 40·8 per cent. of the total cases admitted during 1912." Dr. Hamer discusses at considerable length an important report on enteric fever in South-West Germany, which appeared in 1912, and in which are given the results of a campaign against the disease undertaken by Koch. Reference is made to recent experience of the disease in South-West Germany as contrasted with that in London and in Belfast.

Pulmonary Tuberculosis—Phthisis.

From a diagram giving the death-rates from phthisis since 1851 we learn that in London there has been a marked decline in the mortality of both sexes; that its greatest incidence is upon males; and that until recent years the decline had been more manifest in females than in males. From the beginning of 1912 a complete system of notification of pulmonary tuberculosis has been in force; but the results for that year cannot be considered representative, inasmuch as many old cases were then notified for the first time. A uniform system of tabulating the notified cases is urgently needed, and in the event of its accomplishment many data of social and economic importance would in a few years be available for the guidance of sanitary authorities. From an instructive table the close relationship existing between "social condition" and phthisis mortality is conspicuous. It will there be seen that in the lowest social groups the loss of life from phthisis is more than twice that in the highest social group.

(B)—SANITARY ADMINISTRATION.

Midwives Act, 1902.

The supervision of midwives in London is entrusted by the Council to two medical inspectors, Miss E. Macrory, M.B., and Miss M. A. Pilliet, M.B. The number of midwives on the Council roll is 4985, of whom only 558 have given notice of their intention to practise. About 30,000 labours annually are attended by London midwives. In addition to routine inspection, the medical inspector pays special visits to a midwife whenever a case of septic nature or persistent high temperature occurs in her practice. In 1912 the inspectors paid 1570 such visits to midwives or institutions employing midwives, respecting 1121 of which the reports were satisfactory. About 3000 confinements occur annually in Poor-law infirmaries, most of which are conducted by midwives. Over 5000 cases are taken annually to the maternity hospitals, and some 18,000 or 20,000 women are delivered in their own homes by midwives working for maternity hospitals. Of the total births in London it is estimated that 25 per cent. are attended by midwives, excluding the cases attended in infirmaries. The rules of the Central Midwives Board provide that in certain cases a midwife must decline to attend alone, and must advise that medical aid be obtained. During the year this rule was obeyed in 3603 instances, as compared with 1113 instances in the year 1905. Assuming that 30,000 confinements were attended by midwives in 1912, it appears that medical assistance was required in 12 per cent. of the cases—viz., in 7·8 per cent. on account of the mother, and 4·2 per cent. on account of the child. During the same year 380 cases of puerperal fever were notified, of which 124, or 33 per cent., terminated fatally. It is the duty of a midwife to advise medical help whenever inflammation of the eyes occurs in an infant. Thereupon a medical inspector visits the child to ascertain whether the child has received medical aid either at home or in a hospital. In 1912 the Council's inspectors visited the 383 children reported as requiring medical attention. 298 of these were reported cured; in 4 cases

there was impairment of vision; the remaining children either died during treatment or were lost sight of.

Food Inspection.

The milk-supply of London continues to receive careful supervision by the Council's officers. The registers of cowhouses, dairies, and milkshops are frequently revised, and the sanitary condition of these places is kept under observation. The cows in the London cowsheds are periodically examined by the veterinary inspector with a view of detecting animals affected with tuberculosis. In the course of the year six inspections of all the cows in the London cowsheds were made, with the result that 22 cows were slaughtered because of the existence of tuberculosis of the udder. The carcasses were destroyed and statutory compensation was paid to the owners. Under Part 4 of their General Powers Act the Council is authorised to deal with tuberculous milk. Under these powers the inspectors take samples from churns of milk consigned from the country to the London railway termini, and these are submitted for examination to the Lister Institute. Whenever the examination proves the existence of tubercle bacilli in the milk a clinical examination of the cows at the dairy farm concerned is made by a veterinary inspector, and cows found to have tuberculous udders are certified to be dealt with under the Dairy and Cowsheds Order. During the year 2991 samples of milk were examined, of which 8·4 per cent. were returned as tuberculous, the proportion thus returned in the preceding year having been 10·4 per cent.

Cleansing of Persons Act.

Particular attention has been paid during the year to the administration of the Cleansing of Persons Act of 1897, and of the powers conferred by the cleansing sections of the General Powers Acts. Associated with this work is the inquiry into the seasonal prevalence of flies and of particular kinds of vermin, and the comparison of this prevalence with the incidence of certain contagious diseases. This subject was dealt with in detail in the report for 1909, and was again referred to in the report for 1911, when a diagram was inserted showing the relationship between prevalence of flies and diarrhœa mortality.

(To be concluded.)

MARCH AT HOME AND ABROAD.

At Home.

MARCH, which in this country is generally among the very driest periods of the year, proved a striking exception to the rule. Very few days (or nights) passed without more or less rain, and the sunshine was much below average. The wind nearly always came from some mild point of the compass, usually from south-west or west, with the result that frost was seldom experienced, and the temperature was generally high for the time of year. The first fortnight was, however, considerably milder than the last, and the mean temperature for the whole month worked out at between 1° and 3° above the average. At the Kew Observatory, which may be taken to represent the metropolitan area and the Home Counties, the mean maximum temperature of the afternoons was a trifle below 50°, or 1° above the normal, while the mean minimum of the nights was 36½°, also 1° above the normal. Exceptionally warm days for March were rare; on the 12th the thermometer touched 57°, but failed to rise so high again until the 31st, when it reached the genial figure of 63°. Very low maxima were equally rare; on the 9th there was no higher reading than 40°, and on the 20th the maximum was 39°, but on all the other days the figure ranged above 45°. Frost in the air occurred on only seven nights, although ground frost was naturally much more frequent. A normal March gives 13 days with rain, yielding a total of 1·59 in., but last month the number of rainy days was 27 and the aggregate fall 3·88 in. The rain was, nevertheless, seldom heavy, and the greatest amount within 24 hours was 0·72 in. on the 8th. As many as nine days were entirely sunless, and several others afforded but an occasional gleam, with the result that the total duration for the month was no more than 83 hours, against an average of 109 hours. The Midlands and Western Midlands differed little from London in the temperature. Nottingham was about 2° colder both during the day and night, and Bath a little warmer. Both places had rain on 23 days, the respective falls being 2·12 in. at Nottingham, 0·52 in. more than the average, and as much as 4·01 in. at Bath, an amount exceeding the normal by 2·49 in. At Buxton the mean maximum temperature was 44° and the mean minimum 34°, while the rainfall reached 5·80 in. divided between 28 days. Of the three inland places Bath was the most sunny, getting 92 hours, against 67 hours at Nottingham and 71 hours at Buxton. All the figures were much below the normal, that at Nottingham showing a deficit as great as 49 hours, or more than one and a half hours per day. The south coast, as represented by Brighton, was between 2° and 3° warmer than London both before and after sunrise, while Newquay, in the extreme south-west, was a little warmer than Brighton. Both resorts were rainy. At Brighton rain fell on 23 days and yielded a total of 4·57 in., an excess on the normal of 2·85 in.; and Newquay, with rain on 26 days, had an aggregate of 5·12 in., or 2·78 in. more than the average. Newquay was the brighter spot, recording 117 hours of sunshine, less than half an hour per day below the March normal; at Brighton the total amounted to only 104 hours, being nearly 30 hours less than the average. At Torquay the sun's record was 11 hours higher than at Newquay.

Abroad.

The western and central countries of the continent shared in the dull, wet weather, although their rain was not so frequent as in some parts of England. At Paris 21 days gave more or less rain, and the whole 31 days could give no more than 88 hours of sunshine, only five hours more than at Kew. As a rule, the rain was slight and the aggregate was no higher than 2·36 in. As is nearly always the case in March, Paris was warmer than London, its temperature being between 3° and 4° higher. Really warm days were very few. Almost all the maximum readings were some way below 60° until the 30th, when the thermometer rose to 62°, followed by 69° on the 31st. Brussels had more rain than London, the total, falling on 26 days, amounting to 4·47 in., while the mean temperature was practically the same as at Kew, both during the day and night. At Berlin the temperature was about equal to that in the English midlands, although frost was more rare. From the 4th to the 17th rain fell almost daily and altogether 21 days were rainy, giving a total of 3·03 in. On the Riviera a few days were very wet, but most of the month proved fine and bright, and on many days the temperature rose to 60° and above. At Nice the mean maximum was as high as 58°. The mean minimum, however, was a little lower than at Jersey and the Scilly Isles, the figure being 42°. At Biarritz the weather was very wet and often very rough, gales from the westward occurring frequently. On as many as 23 days a measurable quantity of rain was experienced, and the aggregate was as large as 6·76 in. Day after day was either very cloudy or entirely overcast, but with the wind from the south-west or west the temperature was never low, and the mean for the month was about the same as at Nice. As at Paris and in this country a great rise of temperature occurred at the end of the month, the 31st bringing a maximum as high as 77°. Over the greater part of Italy the weather was warmer than on the Riviera, although rain was more common. Some sharp falls were general early in the month, and after the 15th very few days were dry. At Rome rain fell on 13 days, with a total of 2·77 in. The mean maximum temperature was fairly high, exceeding that at Nice by 3°, and a similar difference was shown by the minimum thermometer. Down at Madeira the month was almost continuously fine. Only three days brought rain, while the temperature, very equable, had a mean of 64° during the afternoon and 54° at night. The highest reading recorded was 70° on the 16th, and the lowest 50° on the 5th and 9th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 97 English and Welsh towns 9011 births and 5630 deaths were registered during the week ended Saturday, April 4th. The annual rate of mortality in these towns, which had been 15·4, 15·2, and 16·5 per 1000 in the three preceding weeks, declined to 16·2 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 16·4, against 16·1 per 1000 in London during the same period. Among the several towns

the death-rate last week ranged from 7·7 in Enfield, 8·1 in Ealing, 8·4 in Eastbourne, and 8·7 in Wimbledon and in Dewsbury, to 22·7 in Great Yarmouth and in Swansea, 23·3 in St. Helens, 23·9 in Plymouth, 27·6 in Rochdale, and 28·1 in Dudley.

The 5630 deaths from all causes were 111 fewer than the number in the previous week, and included 484 which were referred to the principal epidemic diseases, against numbers steadily increasing from 397 to 488 in the six preceding weeks. Of these 484 deaths, 172 resulted from whooping-cough, 137 from measles, 77 from infantile diarrhœal diseases, 51 from diphtheria, 35 from scarlet fever, and 12 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·4, against 1·3 and 1·4 per 1000 in the two preceding weeks. The deaths attributed to whooping-cough, which had steadily increased from 110 to 162 in the six preceding weeks, further rose to 172, and caused the highest annual death-rates of 1·6 in West Ham and in Middlesbrough, 1·7 in Exeter and in Rochdale, 1·8 in Great Yarmouth and in Darlington, and 2·0 in Dudley. The deaths referred to measles, which had been 113, 107, and 140 in the three preceding weeks, fell to 137; the highest death-rates from this disease were 1·6 in Rhondda, 1·7 in Sheffield, 1·8 in Leicester and in Stockton-on-Tees, 1·9 in West Ham, 2·0 in Dudley and in Nottingham, and 2·2 in Rochdale. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 74, 73, and 65 in the three preceding weeks, rose to 77, and included 16 in London, 8 in Liverpool, 7 in Birmingham, 6 in Manchester, 3 in Burnley, and 3 in Merthyr Tydfil. The deaths attributed to diphtheria, which had been 67, 51, and 73 in the three preceding weeks, declined to 51, of which 19 occurred in London and its suburban districts, 6 in Birmingham, 3 in Leeds, and 3 in Sheffield. The deaths referred to scarlet fever, which had been 31, 37, and 33 in the three preceding weeks, were 35, and included 8 in Birmingham, 7 in London, 3 in Manchester, and 2 each in Walthamstow, Sheffield, and Newcastle-on-Tyne. The fatal cases of enteric fever, which had been 13, 21, and 15 in the three preceding weeks, further declined to 12, of which 3 were recorded in London.

The number of scarlet fever patients in the London Fever and the Metropolitan Asylums Hospitals, which had steadily decreased from 3599 to 3143 in the nine preceding weeks, rose to 3183 in the week under notice; 400 new cases were admitted during the week, against 320, 319, and 347 in the three preceding weeks. These hospitals also contained on Saturday, April 4th, 1316 cases of diphtheria, 357 of whooping-cough, 134 of measles, and 67 of enteric fever, but not one of small-pox. The 1344 deaths from all causes in London were 89 fewer than the number in the previous week, and were equal to an annual death-rate of 15·5 per 1000. The deaths referred to diseases of the respiratory system, which had been 223, 250, and 291 in the three preceding weeks, declined to 280, and were 98 below the number recorded in the corresponding week of last year.

Of the 5630 deaths from all causes in the 97 towns, 191 were attributed to different forms of violence, and 460 were the subject of coroners' inquests. The causes of 51, or 0·9 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Sheffield, Leeds, Bristol, Bradford, Hull, and in 50 other smaller towns. Of the 51 uncertified causes of death, 9 were registered in Birmingham, 7 in Liverpool, 3 each in Preston, Gateshead, and Tynemouth, and 2 each in Portsmouth, Dudley, Warrington, and Darlington.

HEALTH OF SCOTCH TOWNS.

In the 16 largest Scotch towns 1240 births and 819 deaths were registered during the week ended Saturday, April 4th. The annual rate of mortality in these towns, which had been 17·9, 16·6, and 16·5 per 1000 in the three preceding weeks, rose to 18·6 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these Scotch towns averaged 18·2, against 16·4 per 1000 in the 97 large English towns. Among the several towns the death-rate in the week under review ranged from 7·6 in Kirkcaldy, 8·2 in Clydebank, and 13·8 in Perth and in Motherwell, to 20·9 in Aberdeen, 23·5 in Kilmarnock, and 25·4 in Greenock.

The 819 deaths from all causes were 93 in excess of the number in the previous week, and included 81 which were referred to the principal epidemic diseases, against 66 and 78 in the two preceding weeks. Of these 81 deaths, 37 resulted from measles, 15 from whooping-cough, 14 from infantile diarrhœal diseases, 9 from diphtheria, 4 from scarlet fever, and 2 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases last week was equal to 1·8, against 1·4 per 1000 in the 97 large English towns. The deaths attributed to measles, which had been 34, 38, and 34 in the three preceding weeks, rose to 37, of which 21 occurred in Glasgow, 5 in Edinburgh, 3 in Ayr, and 2 each in Paisley, Coatbridge, and Motherwell. The deaths referred to whooping-cough, which had been 8, 10, and 11 in the three preceding weeks, further rose to 15, and included 8 in Glasgow and 4 in Coatbridge. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 10, 5, and 14 in the three preceding weeks, were again 14 in the week under notice; of this number 5 occurred in Dundee, 3 in Glasgow, and 3 in Aberdeen. The deaths attributed to diphtheria, which had been 14, 6, and 9 in the three preceding weeks, were again 9, of which 3 were recorded in Glasgow. The 4 deaths referred to scarlet fever, which were all registered in Glasgow, were 5 below the average in the earlier weeks of the quarter. The 2 fatal cases of enteric fever and also 1 of typhus occurred in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 137, 117, and 111 in the three preceding weeks, rose to 166 in the week under notice; 33 deaths resulted from various forms of violence, against 22 and 31 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 27 town districts of Ireland 747 births and 502 deaths were registered during the week ended Saturday, April 4th. The annual rate of mortality in these towns, which had increased from 19·2 to 22·8 per 1000 in the four preceding weeks, fell to 21·7 per 1000 in the week under notice. During the 13 weeks of last quarter the mean annual death-rate in these towns averaged 21·5 per 1000; in the 97 large English towns the corresponding rate did not exceed 16·4, while in the 16 Scotch towns it was equal to 18·2 per 1000. The annual death-rate for the week under review was equal to 26·1 in Dublin (against 15·5 in London and 19·0 in Glasgow), 17·8 in Belfast, 21·1 in Cork, 14·0 in Londonderry, 17·6 in Limerick, and 35·1 in Waterford, while in the 21 smaller towns the mean death-rate was equal to 21·4 per 1000.

The 502 deaths from all causes were 24 fewer than the number in the previous week, and included 48 which were referred to the principal epidemic diseases, against numbers increasing from 33 to 67 in the four preceding weeks. Of these 48 deaths, 26 resulted from measles, 10 from whooping-cough, 6 from infantile diarrhœal diseases, 3 from scarlet fever, and 3 from diphtheria, but not one from enteric fever or from small-pox. The mean annual death-rate from these diseases was equal to 2·1 per 1000, against corresponding rates of 1·4 and 1·8 per 1000 in the English and Scotch towns respectively. The deaths attributed to measles, which had increased from 4 to 34 in the four preceding weeks, declined to 26, of which 22 occurred in Dublin. The deaths referred to whooping-cough, which had been 4, 11, and 12 in the three preceding weeks, fell to 10, and comprised 3 in Dublin, 3 in Belfast, 3 in Cork, and 1 in Tralee. The fatal cases of diarrhœa and enteritis (among infants under 2 years), which had been 14, 9, and 8 in the three preceding weeks, further declined to 6, but showed no excess in any of the towns. The 3 deaths attributed to scarlet fever, of which 2 occurred in Belfast, were 4 below the average in the earlier weeks of the quarter. Of the 3 deaths referred to diphtheria, which coincided with the average in the earlier weeks, 2 were registered in Belfast and 1 in Cork.

The deaths referred to diseases of the respiratory system, which had increased from 97 to 113 in the four preceding weeks, further rose to 118 in the week under notice. Of the 502 deaths from all causes, 158, or 31 per cent., occurred in public institutions and 8 resulted from various forms of violence. The causes of 23, or 4·6 per cent., of the total deaths were not certified either by a registered medical practititioner or by a coroner after inquest; in the 97 large English towns the proportion of uncertified causes of death did not exceed 0·9 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet-Surgeon: H. S. Hall to the *Challenger* and for group of Third Fleet ships. Staff-Surgeons: J. Bourlas to the *Triumph*, additional for Hong-Kong Hospital; J. E. Johnston to the *Adamant*; and D. D. Turner to be lent to the *Hearty*, temporary.

ROYAL NAVAL VOLUNTEER RESERVE.

The undermentioned has been appointed a Surgeon: Armin Gascoigne Vavasour Elder (dated April 8th, 1914).

ROYAL ARMY MEDICAL CORPS.

Surgeon-General W. Babtie, V.C., C.B., C.M.G., has been appointed Director of Medical Services to His Majesty's Forces in India, vice Surgeon-General Sir A. T. Sloggett, C.B., C.M.G., transferred to the Home Establishment.

Colonel W. W. Pike, D.S.O., has been selected for appointment as Assistant Director of Medical Services to the

Abbottabad and Sialkot Brigade, vice Colonel R. Kirkpatrick, C.M.G. Colonel W. M. Russell has taken up duty on the Headquarters Staff at Malta as Deputy Director of Medical Services.

Lieutenant-Colonel J. C. Connor has been selected for appointment as Deputy Assistant Director of Medical Services to the Irish Command Headquarter Staff. Lieutenant-Colonel B. H. Scott has been appointed for duty in the London recruiting area. Lieutenant-Colonel G. W. Tate has been appointed Senior Medical Officer to the Military Hospital at Bermuda. Lieutenant-Colonel N. Faichnie has arrived home for duty from India. Lieutenant-Colonel R. H. Penton has been appointed in charge of the Military Hospital at Ranikhet Cantonment.

Major J. H. Barbour has arrived home from India. Major E. V. Aylen has been transferred from the Military Hospital at Gharial to Rawal Pindi Cantonment. Major E. W. Slayter has been appointed to hold charge of the Military Hospital at Cahir. Major R. L. Popham and Major E. S. Clark have embarked for India. Major J. H. R. Bond has taken over charge of the Military Hospital at Naini Tal. Major R. Tilbury Brown has joined at Darjeeling. Major J. T. Johnson has been appointed Deputy Assistant Director of Medical Services, Sanitary Branch, to the Eighth (Lucknow) Division. Major G. S. Crawford has been appointed to officiate as Medical Inspector of Recruits to the Irish Command Headquarters Staff. Major G. J. S. Archer has been transferred from Cosham to Dorchester. Major D. Harvey has been appointed for duty to the Royal Army Medical College, Grosvenor-road, S.W. Major A. A. Seeds has been transferred from the Military Hospital at Campbellpore to Rawal Pindi Cantonment. Major H. N. Dunn has been selected for advancement to the rank of Lieutenant-Colonel. Major H. K. Palmer has arrived home from Aden. Major W. A. S. J. Graham has been appointed Senior Medical Officer at the Military Hospital, Neemuch Cantonment. Major C. J. O'Gorman has been appointed Civil Surgeon in the Barrackpore District, vice Lieutenant-Colonel F. C. Morgan. Major W. G. Beyts has been appointed to hold charge of the Military Hospital at Roorkee Cantonment. Major M. M. Lowsley has been appointed Specialist in Midwifery and Diseases of Women and Children to the Third (Lahore) Division. Major W. W. Browne has been appointed Specialist in the Prevention of Disease to the Ahmednagar Brigade and placed in charge of the Bacteriological Research Laboratory at Headquarters. Major H. W. Grattan has been appointed Honorary Surgeon to H.E. the Viceroy and Governor-General of the East Indies.

Captain G. Ormrod has embarked for the Sierra Leone Protectorate. Captain A. Irvine-Fortescue has taken up special duty in Japan. Captain D. DeC. O'Grady has been appointed to the Eastern Command. Captain C. Ryles has arrived home from India. Captain R. J. Franklin has been appointed to Solon Cantonment. Captain T. C. C. Leslie has embarked for India. Captain F. W. W. Dawson has been appointed Specialist in the Prevention of Disease to the Jullundur Brigade and placed in charge of the Bacteriological Research Laboratory at Headquarters. Captain D. G. Carmichael has been appointed to hold charge of the Military Hospital at Khanspur. Captain E. B. Lathbury has arrived home from Bareilly Cantonment. Captain K. A. C. Doig has been appointed to the staff of the Military Hospital at Meerut Cantonment. Captain A. C. Amy has taken up duty at Manchester. Captain J. H. Duguid has been appointed Specialist in Otology to the Ninth (Secunderabad) Division. Captain C. E. W. S. Fawcett has embarked for India. Captain C. B. Millar has been appointed to hold medical charge at Fort Campden, Queenstown. Captain E. C. Whitehead has taken up duty at Dinapore Cantonment. Captain C. W. Bowle has arrived home from Jubbulpore Cantonment. Captain A. M. Benett has been appointed to hold charge of the Military Hospital at Newport. Captain G. F. Rugg has been appointed Specialist in Advanced Operative Surgery to the First (Peshawar) Division. Captain W. K. Beamen has arrived home from Malta. Captain T. W. Browne has been transferred from Tipperary to the Military Hospital at Buttevant. Captain A. C. Elliott has been appointed to hold medical charge at Landguard Fort. Captain R. D. O'Connor has arrived home for duty from Multan Cantonment. Captain H. H. Leeson has been transferred from the Military Hospital at Alexandria to Cairo.

INDIAN MEDICAL SERVICE.

Surgeon-General Sir C. Pardey Lukis, K.C.S.I., has been appointed an Additional Member of the Legislative Council of the Governor-General of India.

Brevet-Colonel and Lieutenant-Colonel H. F. Cleveland has been appointed an Honorary Surgeon to the Viceroy.

Lieutenant-Colonel E. C. MacLeod has been appointed Superintendent of the Teypur Jail. Lieutenant-Colonel A. H. Nott has been granted furlough for two years. Lieutenant-Colonel W. R. Edwards, C.M.G., has taken up duty as Chief Medical Officer to the North-West Frontier Province.

Major J. M. Woolley has been appointed for special duty under the Government of Bengal. Major R. F. Baird has been appointed to hold charge of the Lunatic Asylum at Benares. Major H. Kirkpatrick has taken up duty as Professor of Pathology at the Government Medical College, Madras.

Captain R. A. Needham has been appointed for special duty under the orders of the Director-General. The services of Captain F. B. Shettle have been placed at the disposal of the Government of Bombay. Captain J. Woods has been appointed Substantive Medical Officer to the 53rd Regiment of Sikhs. Captain R. D. Willcocks has been appointed to the Civil Medical Department of Madras Presidency. Captain H. Coddington Brown has taken up duty at the Central Research Institute, Kasauli Cantonment, on transfer from the 47th Regiment. Captain T. W. Harley has been appointed Professor of Biology at the Government Medical College, Madras, and Surgeon to the General Hospital. Captain C. G. Seymour has been appointed Specialist in the Prevention of Disease. Captain J. McC. Anderson has joined at Hoshangabad. Captain J. W. McCoy has been appointed Civil Surgeon at Cachar, Assam. Captain T. G. F. Paterson has taken up duty at Surat as Officiating Civil Surgeon. Captain G. F. I. Harkness has been appointed Officiating Resident Surgeon at St. George's Hospital Bombay. Captain C. A. Gill has been appointed to officiate in the Civil Medical Department in the Punjab. Captain A. D. Stewart has been appointed to officiate in medical charge of the Gurkha Recruiting Depôt at Gorakhpore. Captain W. D. H. Stevenson has taken up duty as Assistant to the Director of the Bombay Bacteriological Laboratory.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Lieutenant George B. McCaul resigns his commission (dated April 8th, 1914).

Hubert Charles George Pedler, late Surgeon-Lieutenant, 1st Life Guards, and late Staff-Sergeant, University of London Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated March 18th, 1914).

Cadet Staff-Sergeant Robert Lister Horton, from the University of London Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated March 13th, 1914).

TERRITORIAL FORCE.

Royal Army Medical Corps.

2nd South-Western Mounted Brigade Field Ambulance, Royal Army Medical Corps: Lieutenant Rupert Waterhouse, from the List of Officers attached to Units other than Medical Units, to be Lieutenant (dated Feb. 9th, 1914).

1st East Anglian Field Ambulance, Royal Army Medical Corps: Major Ernest V. Gostling to be Lieutenant-Colonel (dated April 8th, 1914).

3rd West Lancashire Field Ambulance, Royal Army Medical Corps: Major Archibald Gordon Gullan, from the 1st West Lancashire Field Ambulance, Royal Army Medical Corps, to be Lieutenant-Colonel (dated April 8th, 1914). Major Elisha H. Monks resigns his commission, and is granted permission to retain his rank and to wear the prescribed uniform (dated April 8th, 1914).

For Attachment to Units other than Medical Units.—Major Charles Thomson, Retired List (late Indian Medical Service), to be Major (dated Nov. 1st, 1913). Richard Mervyn Wilson (late Surgeon-Captain, Derbyshire Yeomanry) to be Captain (dated March 1st, 1914). Alfred John Gibson (late Lieutenant, King Edward's Horse (The King's Oversea Dominions Regiment) Yeomanry), to be Lieutenant (dated March 7th, 1914).

Supernumerary for Service with the Officers Training Corps.—Captain Norman Cecil Rutherford, from the Unattached List for the Territorial Force, to be Captain, for service with the University of London Contingent, Senior Division, Officers Training Corps (dated Feb. 12th, 1914).

Attached to Units other than Medical Units.—Lieutenant Jacob F. Farrow to be Captain (dated March 6th, 1914). Captain John C. S. Burkitt to be Major (dated April 8th, 1914). Captain Henry S. Walker resigns his commission (dated April 8th, 1914).

TERRITORIAL FORCE RESERVE.

Royal Army Medical Corps.

Captain Arthur T. Sissons, from the Unattached List for the Territorial Force, to be Captain (dated April 8th, 1914).

THE ROYAL ARMY MEDICAL COLLEGE.

Lieutenant-General Sir James Grierson, K.C.B., C.V.O., C.M.G., will distribute the prizes at the Royal Army Medical College, Millbank, on Friday, May 1st, at 4 P.M. After the distribution Colonel B. M. Skinner and the officers, R.A.M.C., will be at home, and afternoon tea will be served in the officers' mess.

MEDICAL PRACTICE UNDER THE INSURANCE ACT.

(BY OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1069.*)

XLIII.—LONDON: ADMINISTRATIVE DIFFICULTIES AT DENMARK HILL.

MY next visit was to a successful panel doctor who lives at Denmark Hill. He did not commence by eulogising the Act, but, on the contrary, was soon quite busy describing some shortcomings. Thus, the Act had just been amended, so that men up to the age of 70 were accepted. Before, the limit was 65 years. These old men have a voucher given to them. The doctor signs the voucher, the Insurance Committee then stamps it, and sends it back to the insured person, so that it now bears the doctor's signature and the committee's stamp. All this constitutes more routine than the persons concerned quite like, but it has served to show that a considerable number of these old men who were excluded from the Act before it was amended have nevertheless been receiving medical benefits all the time, for they had somehow obtained the red tickets to which they were not entitled. Also, some insured persons have been found in possession of several red tickets. Others have called on panel doctors without any red ticket at all and no evidence to show but their insurance card. As the panel doctor on whom I called has a list of 3500 insured persons whom he attends with the aid of an assistant, he has had plenty of opportunities of dealing with irregularities of this description, and the mechanism of administration is of great importance when there are so many persons needing attendance.

Since Jan. 12th a new form replaces the old red ticket, but some of the approved societies continued during the month of February issuing forms that should not have been used after the 12th of the previous month. This naturally caused a great deal of confusion, particularly as there has been such a number of forms issued. The panel doctors began working the Act on Jan. 15th, 1913, and they had then reached the form relating to medical affairs No. 20. By the month of February, 1914, they had received form No. 50. These forms relate to transfers, to medical benefits at the Post Office, to change of doctor during the year when the signatures of both doctors are needed, &c. Then there are changes of address, and, again, when a doctor has joined the panel after most of his colleagues administrative complications arise. In Form 20 the insured had only to state the name of the Approved Society to which he belonged. This has caused an appalling amount of confusion. No one seems to have foreseen that such a declaration in no wise sufficed to trace the individual. It is very little use if John Brown or George Smith merely states that he belongs to the Oddfellows or the Foresters. But if they give their number, the name and address of the lodge to which they belong, they can be traced, and their statements verified, without the slightest difficulty or delay. In consequence of this form thousands of insured persons could not be traced back to the societies to which they belonged. My informant declared that he was now attending a considerable number of persons without knowing whether they were entitled to such attendance.

The National Insurance Practitioners' Association[1] worked very hard to put some order where so much disorder prevailed; but London stood at a special disadvantage, because the opposition to the Act was so strong that it was not possible until a few weeks ago to elect a London Medical Committee as laid down by the law. This difficulty, however, it was anticipated by supporters of the Act, would be overcome by the new enactment which had brought into existence the Panel Committees officially representing doctors on the panel. In provincial and country districts this sort of committee was not so much needed. In many parts of the country a Local Medical Committee exists and is fairly representative, but it was argued that had a Medical Committee been elected for London the panel doctors' interests would hardly have made themselves felt.

The Certificate Trouble.

Yielding to the universal feeling that simplification is absolutely necessary, the Approved Societies have now all agreed to adopt the same form of certificate. Still there is trouble. The Insurance Committee gives a book of certificates, and the latter, when signed, entitles the bearer to be put on the sick list. The panel doctor hands over one of these certificates to his patient, and he at once sends it to his society. But the next day the patient may return to his panel doctor and present his Approved Society's form which has on it a certificate exactly like the one the doctor had given him the day before. This second certificate the doctor has also to sign. The following or third day is probably that on which the agent of the Approved Society makes his round of visits, and he wants yet a third certificate for the week's continuation of the sick allowance. This apparently dates according to the agent's visits and not in accordance with the patient's illness. Thus the same statement may have to be signed three times in the course of three days. It is the small Friendly Societies that give the most trouble. The big commercial insurance companies do not usually insist on such complications in regard to the signing of certificates. To add to the confusion many societies have persisted in using up their stock of "literature" even when it was no longer appropriate. Thus insured persons present themselves and make some application only to be told that their procedure, though perfectly correct according to the old rules, is to-day no longer applicable.

Financial Aspects of Panel Practice.

In answer to some of my questions, the popular doctor to whom I have referred said that many of the 3500 insured persons for whom his assistant and himself were responsible had belonged to clubs for which he was the medical officer before the Act. These patients had not changed in any way. Their behaviour and attitude had not changed at all now that they came to him as insured patients instead of members of clubs. He felt assured that patients, whether club patients or insured persons—it did not matter who they might be—if treated courteously and sympathetically would always behave back in a similar way. The doctor should be able to get on with all sorts. A certain number of his patients, he said, showed a great readiness to declare themselves sick. But they had been trained to do this and to rely on

[1] See THE LANCET, Jan. 31st, 1914, p. 346.

a bottle of medicine. It would take years to teach such persons that a bottle of medicine is but a small part of the treatment. Very few of his insured patients had more than £100 a year.

I have come to the conclusion from all I heard that the insured persons whose incomes range from £100 to £160 are likely to occasion a little more trouble than the poorer classes. The feeling which made people imagine it was not good form to be insured is now wearing off. Fees certainly can be obtained from persons whose income is above £100, but there was previously much trouble in getting paid and many bad debts, and many persons removed leaving no address, so that even with this section, and right up to the income-tax limit, the capitation system may be found to pay better. Two panel doctors in the Dulwich and Denmark Hill district have calculated what they made per item from patients on their panel lists. The one received 1*s.* 3½*d.* per item and the other 1*s.* 7*d.* As this included the mere signing of a certificate it was really quite as good as the 1*s.* 6*d.* or 2*s.* fee for consultation at the surgery and the 2*s.* 6*d.* for a visit if all the bad debts are deducted. Another panel doctor, reckoning from April to the end of December—that is, cutting off the three worst months of the year—found that he had received 2*s.* per item. This, while it lasts, is certainly better than private practice was at minimum fees. My first informant said that he was not anxious for an income limit, and that right up to the income-tax mark he thought practice on the capitation principle paid better.

Hospitals for the Insured.

Since the Act came into force it has been found difficult in this district to get patients into hospitals, and the creation of many State or municipal hospitals is freely spoken of as a possible solution. As it is, the Insurance Commissioners have retained beds for the reception of tuberculous patients in various hospitals. Why should not this principle be extended? But if this plan were pressed to its logical consequence, side by side with the extension of the Act to include the dependents of insured workers, the whole system governing the organisation of hospitals would have to be remoulded on an entirely different basis. If everybody is to be brought under the scope of State insurance, then it would only be logical to anticipate that the hospitals must also be brought under a scheme of State management.

Perhaps when the State is thus gradually led to provide medical aid for nine-tenths of the entire population it will better realise the importance of removing the obvious causes of preventable diseases. For though Denmark Hill is a favoured district to some extent, a very earnest protest may be entered against the awful housing conditions which many of the patients under the National Insurance Act there have to endure.

It is said that these very poor and ill-housed people are often neglected or carelessly treated by the practitioners on the panels—the statement is regularly made, among others, by those who desire to see a multiplication of medical aid institutes such as have come into being in Chesterfield, and the control of medical practice falling again into the hands of clubs managed by lay committees. Let it be granted that among the first medical men to serve on the panels were medical men whose habits and routine of practice had been learned in cheap dispensaries. They were doing the work before the Insurance Act came in force, and it was not possible that they should immediately begin to order their professional lives on a higher standard. But at Denmark Hill, as elsewhere, I gathered the impression that bad work would be found out and that the lists would limit themselves in time to the most competent workers.

(To be continued.)

Home and Foreign Notes.

(FROM OUR OWN CORRESPONDENTS.)

LIVERPOOL.

Annual Meeting of the Liverpool Stanley Hospital.

THE Liverpool Stanley Hospital held its forty-seventh annual meeting in the Town-hall, Liverpool, on April 7th, under the chairmanship of the Lord Mayor, Mr. H. R. Rathbone, J.P. The chairman, in moving the adoption of the report and accounts, deplored the decrease in the annual subscriptions, and appealed for a more widespread sympathy with the work of the hospitals. The president of the hospital, Sir Percy Bates, Bart., seconded the resolution, and pointed out that the effect of the recent legislation had been to increase the work of all hospitals, which needed more and more financial support. Mr. Oswald Dobell, the honorary treasurer, submitted the balance-sheet, which showed a deficit on the year of £931, bringing the total debit balance up to £4462. Whilst this was somewhat disheartening, he had been greatly encouraged by the spontaneous response to his appeal for funds to build a much-needed nurses' home. This was now ensured, and would be a great boon to the nursing staff. Mr. W. M. King, seconded by Mr. W. Bagshaw, moved the re-election of the honorary medical staff. The Rev. Stanley Rogers, in moving the reappointment of the committee and officers, eulogised the good work which the Stanley Hospital was doing, and of which he heard so much when going about the populous and poor districts of the north end of Liverpool. The resolution was seconded by the Rev. S. Barrow and carried. The proceedings terminated with a cordial vote of thanks to the Lord Mayor.

Treatment of Tuberculosis.

The administrative officer of the Liverpool Insurance Committee (Mr. Gill Hodgson) has just issued his report on the treatment of tuberculosis. The report, which was adopted at the meeting of the committee, gave the exact number of applications for sanatorium treatment in the 18 months ending Jan. 11th as 1829, of whom 1557 were recommended for medical treatment, the pulmonary cases being 1317. Of the 1495 who had received treatment 782 were men, 338 women, 194 boys, and 181 girls. The cost of treatment had been: Sanatorium and hospital (1029), £14,487; dispensary (150), £270; domiciliary (704), £6913; total, £21,671. The results of treatment were as follows: Discharged fit for work, or if juveniles "disease arrested," 152; improved, 448; found not tuberculous, 15; unimproved, 106; worse, 6; died, 210; treatment discontinued for other than medical reasons, 37; total, 975; under treatment Jan. 11th, 520. The apparently large number of deaths was due to the fact that many advanced cases were treated where the hope of recovery was but small, the committee desiring to secure constant attention and to avoid the great risks of

infection which must have been incurred by leaving these patients in their own homes.

Memorial to Dr. O. T. Williams.

A brass tablet has been placed in the chapel of the Royal Infirmary in memory of the late Dr. O. T. Williams, who was assistant physician to the hospital, and who died on Jan. 15th, 1913, in his thirty-sixth year. The tablet bears the following inscription:—

"A true physician, an ardent student, a helpful colleague, a faithful friend."

The tablet is the gift of the medical board of the infirmary.

April 11th.

SCOTLAND.

Annual Report of the Registrar-General for Scotland.

IN the last annual report, now issued, it is stated that the birth-rate for the year is the lowest on record. The number of births registered during the year was 121,850, being 2209 fewer than in the preceding year, and equal to a birth-rate of 25·65 per 1000, or 2·73 less than the average rate of the preceding ten years. It was, however, 1·2 more than the corresponding birth-rate of England and Wales, and 2·4 more than that of Ireland. The illegitimate rate for the year was 7·55 per cent. of the total children registered, the highest since 1891. The death-rate for the year likewise showed a large decrease, being the smallest number of deaths registered in the country since 1896, and the lowest death-rate yet recorded. It is significant to note that the deaths from tuberculous disease numbered 8387, equal to 1·77 per 1000, which is the lowest rate on record. It is 130 less than the number recorded in the previous year, and 1077 less than the mean of the numbers for the preceding five years, and 1240 less than the mean of the numbers for the preceding ten years. Registered marriages numbered 31,811, equal to a rate of 6·7 per 1000, and showing a slight decrease on previous years.

University of Edinburgh: Honorary Degrees.

Among those upon whom the Senatus Academicus have resolved to confer the degree of LL.D. *honoris causâ* are Dr. Byrom Bramwell, consulting physician to the Edinburgh Royal Infirmary, and Dr. F. W. Mott, F.R.S., pathologist to the London County Asylums and physician to Charing Cross Hospital.

Treatment of Ringworm in Edinburgh School Children.

Arrangements have now been completed between the Edinburgh School Board and the managers of the Royal Infirmary for the treatment of cases of ringworm and favus with X rays at this institution. Most of these cases are now under the supervision of the school medical officers, and it has been arranged that the after-treatment of the cases treated at the infirmary is to be in the hands of the nurses attached to the special school which is under the School Board, with the supervision of the medical officers.

Royal Edinburgh Hospital for Sick Children.

While there is still a large deficiency of ordinary income, the directors of this institution note that the amount received from subscriptions and donations exceeds that received in 1912 by £298. The expenses have been, of course, heavier owing to the increased price of coal and household commodities. There have been certain rearrangements of wards in the hospital, whereby eight more beds are available for surgical cases, there being now 69 medical and 50 surgical cots in the hospital. Two of the latter have been set apart for ear and throat cases, under the charge of the aural surgeon, Mr. W. G. Porter. The directors propose to appoint a surgeon-dentist to in-patients, an appointment which is very desirable in every way. The vacancy on the medical staff caused by the retirement of Dr. G. H. Melville Dunlop has been filled by the appointment of the senior assistant physician, Dr. J. W. Simpson, and Dr. N. S. Carmichael has been appointed extra physician in room of Dr. Simpson. In the medical report the following paragraph occurs:—

Considerable attention has recently been drawn to the prevalence of tuberculosis arising from infected milk in Edinburgh and the neighbourhood. The very important investigations of Mr. John Fraser and Dr. Mitchell were initiated in the hospital, and more than confirm the belief of the staff that tuberculous milk is a very real danger to children. It is easy to ensure the safety of the milk used in the wards, but in an out-patient department the subject is fraught with difficulty for financial and other reasons. The staff trust, however, that the directors will take the matter into their consideration.

April 14th.

IRELAND.

Irish Workhouse Administration.

BEFORE Parliament rose for the Easter recess the Chief Secretary for Ireland furnished a return showing, for a period of 12 months, the salaries, including rations, of officers, the average daily number of inmates, their total cost, the rate per head of this cost, and the percentage of such cost expended in salaries, for each workhouse in Ireland. As the workhouses vary greatly in average population, from 25 in Dunfanaghy to 3914 in South Dublin, it is obvious that the cost per head and the percentage of cost spent in salaries must also vary greatly. In South Dublin, for instance, the cost per head is £19 18s. and the percentage on salaries is 17·7, while the figures for Dunfanaghy are £35 10s. and 42·6. But even allowing for necessary differences, the contrast between institutions which are fairly comparable reveals curious discrepancies in cost of administration. The figures for South Dublin are fairly comparable with those for North Dublin and for Belfast. In North Dublin the cost is £20 16s. per head and 21·2 per cent. is spent on salaries. In Belfast it is £22 per head and 26·5 per cent. on salaries. In Cork, which approaches to North Dublin in population, the cost per head is £18 18s., but 25·6 is spent on salaries. Comparing neighbouring workhouses of approximately equal size the differences are still striking. In Cashel, for instance, in county Tipperary, the cost per head is £24 10s. and the percentage on salaries 26·5. In Carrick-on-Suir, in the same county, the cost per head is £20 1s., but the ratio on salaries is 35·4 per cent. In some of the smaller workhouses the figures reached are extraordinary. Killala workhouse costs the ratepayers £45 10s. for each of its 25 inmates, and no less than 53·7 per cent. of this is spent on salaries. There seems to be a good case here for active interference by the Local Government Board.

An Approved Society and Medical Certificates.

At the annual meeting of the Irish Drapers' Assistants' Association, a carefully managed Approved Society doing good work among shop

assistants, a resolution was passed which has an interesting bearing on the question of certification. It was to the effect that where a certificate could not be obtained from the doctor in attendance on a member "pending the settlement of the dispute which at present exists in the medical profession," the executive should have discretionary powers to dispense with a certificate. The Commissioners have supplied this society with the free services of "medical advisers" throughout the country, but it does not appear that the society values their services very highly.

Sir Christopher Nixon.

I regret to learn that Sir Christopher Nixon has from considerations of health resigned his position as senior physician to the Mater Misericordiæ Hospital, to which he has been attached for many years.

March Weather in Belfast.

In the neighbourhood of Belfast during last March 4·21 inches of rain fell on 25 days, making a total of 10·50 inches for this year. The average rainfall for March is 3·05 inches, so that March has been a wet month, with very little of that "dust" which is said to be "May gold."

Strabane Hospital Inquiry.

Mr. John Coffey, who on behalf of the Local Government Board held some time ago an inquiry into the state of the Strabane Fever Hospital, has now reported that the condition of affairs "has been most discreditable for some considerable time past." As regards the "disgraceful exhibition of temper on the part of both the nurses and the wardsmaid deposed to at the inquiry," the Local Government Board have decided not to remove the suspension on one of the nurses, and they have made a note in their records as regards the other (a temporary nurse), whose services had already been dispensed with. They suggest another trial for the wardsmaid, and in reference to the medical officer they say "there appeared to have been a want of firmness on his part throughout these disputes."

Derry Water-supply.

The city of Derry having for long suffered from an inadequate water-supply the city corporation petitioned the Local Government Board to grant a provisional order to enable them to put in force the powers of the Land Clauses Act for the purpose of taking otherwise than by agreement certain lands required for the purpose of an auxiliary water-supply for the city. Mr. P. C. Cowan, C.E., the chief engineering inspector of the Local Government Board, held an inquiry into the matter in Derry in February, and has now reported that a supply of water—pure and adequate—is needed, and that it must meet the city's requirements at all seasons, as well as the anticipated increase in population. The Local Government Board say they cannot sanction a scheme which is a "makeshift," and they refuse to grant the conditional order: they urge the corporation of Derry to "press forward a comprehensive scheme for the water-supply." The Derry water committee reply that the scheme was only temporary to supply the needs of the city until such time (five or six years) when they could get a large scheme carried out, and they now warn the Local Government Board that if any disaster should overtake the city by reason of water shortage the responsibility for this must rest with the Local Government Board, who have blocked the temporary arrangement.

April 14th.

PARIS.

The Hygienic Condition of the First Army Corps.

M. Lemoine, director of the medical department of the First Army Corps, quartered at Lille, has advanced a curious reason for the superiority of the health statistics of this over other corps throughout France. M. Lemoine modestly takes no credit for the small death-rate and hospital admission rate of this corps, but attributes them to the very unhealthy condition of the people from among whom the soldiers of the First Army Corps are enlisted—viz., the departments of the Nord and the Pas-de-Calais, which consist for the most part of factory workers and miners. These are the most densely populated parts of France and their infant mortality is fearful, the districts being ravaged by epidemic diseases. M. Lemoine, therefore, thinks that the young conscripts of 20 have undergone a rigorous process of natural selection, all the feeble ones having been killed off and the survivors having suffered from the infectious diseases and become immune. They also find in the army hygienic conditions vastly superior to those of their original environment. Moreover, the men of this army corps are split up into isolated groups of not more than 200 or 300, each group having its own barracks, so that in epidemics isolation is easy. In support of this special resistance of the men of the First Army Corps M. Lemoine finds that in other army corps the soldiers coming from these two departments are less frequently on the sick list than the other men. The startling conclusion follows that the hygienic condition of a regiment would be better in inverse proportion to that of the civil population from which the men are drawn.

The Serum Therapy of Acute Myelitis.

M. Netter has succeeded in curing acute infectious myelitis by an original serum therapy. The relation of this disease with infectious poliomyelitis of infancy suggested to him that the two diseases were due to a common agent. Flexner and Lewis's observations have shown that monkeys experimentally infected with poliomyelitis were cured by the injection of serum from monkeys immunised against the disease. M. Netter has applied this principle in the case of man, making use of serum from patients who had recovered from an attack of infantile paralysis at antecedent periods of respectively 4 months and 22 years. The serum was injected in a dose of 10 c.c. daily for nine days into the spinal column of a man, aged 31, who had been seized with a severe attack of acute infectious myelitis, motor paralysis and anæsthesia having already affected the lower limbs and trunk, so that extension to the medulla would undoubtedly have occurred. Three patients whom M. Netter had observed in a similar condition three years ago died in a very short space of time. The present patient, therefore, seemed inevitably doomed; yet after the first injection of the serum considerable amelioration set in, sensibility and motility reappeared, and at the end of some weeks the patient was completely cured, with perfect use of his limbs and able to have recourse without fatigue to walking and sports. This case, at present unique, suggests the possibility of an entirely new method of treatment.

Electrocution in the Bath.

The Société de Médecine Publique et de Génie Sanitaire listened recently to a communication from

Professor Gariel in which he reported two cases of death by electrocution in a bath. The electricity was derived from the electric-light mains and conducted to the metal base of the bath. In one case the current was not more than 110 volts, which is generally considered harmless, but the surface of contact, which represented that of the entire body, was large. In the other case the electric communication was established when the subject caught hold with his wet hand of the metal chain of an electric bell, in which the current was certainly much weaker. Recently a case was noted of a workman engaged in the construction of a new underground railway who was electrocuted on touching an electric lamp with moist hands while his feet were in the water. Much uneasiness is aroused over these recurring cases.

The Serum Therapy of Malignant Pustule.

A new treatment of malignant pustule has been brought before the Académie des Sciences by Dr. Roux. It is based on a very interesting principle, and is credited to M. L. and M. Ch. Fortineau, of Nantes. Relying on the known effects of the introduction of the bacillus pyocyaneus into cultures of anthrax bacilli they treated patients suffering from charbon with cultures of the bacillus pyocyaneus sterilised by heat. A single injection sufficed in most cases. The results were excellent, for out of 50 patients affected with the disease only five died, and these came under treatment when their condition was desperate. All the others were quickly and completely cured.

Microbes and Sunlight.

Mme. Victor Henry has discovered an application of the ultra-violet rays which opens a new path in bacteriology. By exposing cultures of anthrax bacilli to the rays of a mercurial vapour lamp she has shown that if the greater number are killed a certain number still remain which, to adapt themselves for this resistance, are modified in shape, becoming cocci (differing, however, from any known spores) in place of long flexible threads. These cocci have formed a new race which has been serially cultivated without returning to its primitive shape, and which on inoculation into animals has given rise to a new disease presenting characters entirely differing from those of classical charbon. This result suggests the hypothesis, possibly somewhat bold, that the different microbes found in nature are only varieties of a small number of primitive types that have become changed in consequence of a more or less prolonged action of sunlight and of the conditions of their medium.

Compulsory Antityphoid Inoculation.

The Senate having passed the Bill previously passed by the Chamber of Deputies, antityphoid vaccination is henceforth compulsory in the French military and naval forces. But now the Société de Médecine Publique et de Génie Sanitaire, after a brief discussion, has passed a resolution demanding that compulsion shall be confined to the troops leaving for Morocco and other regions infected with the disease, that it shall not apply automatically to all young soldiers on enlistment, and that in every case the regimental medical officers shall be the sole judges for its necessity. The society's reasons are that it is not yet known, and cannot be known for many years, that these inoculations have not serious effects in certain subjects, and do not pave the way for other diseases, particularly tuberculosis. Attention is also directed to the fact that the fear of typhoid fever is the principal argument, on establishing barracks in a town, for obtaining the necessary sanitation from the civic authorities, and particularly the provision of drinking water. This provision has been often very grudgingly made by the towns, in consequence of the great expense entailed, and very often with an insufficient ulterior surveillance over the sources used. Under these conditions each case of typhoid fever that has occurred has been always used for exerting pressure on the municipal administration to obtain the further sanitation of the town (as to both its civil and its military sections) by the threat of removing the regiment to some other town. Compulsory antityphoid vaccination, by dissipating the dread of typhoid fever, will give rise to a relaxation in the establishment and maintenance of these sanitary services, and thereby to a recrudescence of other diseases, in regard to which the population has benefited incidentally through these improved sanitary conditions.

April 13th.

ITALY.

Reform of the Medical Curriculum.

THE Royal Committee for the Study of University Reform has just issued its report. The proposals of the Subcommission for the Medical Faculties are giving rise to lively discussion in the medical press. The report starts by advising the separation of the degree of Doctor in Medical Sciences from the qualification to practise medicine. It recommends that the medical curriculum shall be divided into two parts, each of three years' duration. The first comprises physics, botany, zoology and comparative anatomy, pharmaceutical chemistry and toxicology, each a course of one year; physiology, two years; human anatomy, three years; and general pathology, one year. At the end of the three years the examination "di maturità" must be passed. The second period of three years is devoted to the subjects of more exclusively professional interest and their application. To take the examination qualifying for practice the candidate must produce certificates of having satisfactorily attended courses of general clinical medicine and therapeutics for three years; general clinical surgery, orthopædics, throat and ear diseases for three years; obstetrics and gynæcology, mental and nervous diseases, eye diseases, skin diseases, hygiene, children's diseases, and pathological anatomy, for one year each. He will be examined in medicine, surgery, obstetrics and gynæcology, and in hygiene, and among the practical demonstrations he will be required to perform a post-mortem examination. For the degree of Doctor in Medical Sciences the examination is to consist of the presentation and discussion of a thesis and the discussion of certain set subjects. The degree is to have a purely academic value and to confer no right to practise. The candidates must present certificates of satisfactory attendance at courses of physiology and general histology, one year; experimental pharmacology, one year; clinical medicine and clinical surgery, three years each; pathological anatomy, one year; mental and nervous diseases, two years; hygiene, one year; and forensic medicine one year, during a period of at least three years subsequent to the "maturità" examination.

Disease of the Milk Teeth.

Professor Angelo Chiavaro, professor of dentistry

in the University of Rome, publishes in the *Policlinico*, Sezione Pratica, of Feb. 1st an open letter to the Director-General of Public Health drawing attention to the frequency of disease of the milk teeth, with statistics of an examination of 1000 children between the ages of 3 and 6. These statistics show a percentage of 49·6 of cases of dental caries with 1522 teeth so diseased. 673 children had teeth encrusted with tartar; 66 were suffering from gingivitis; and 14 had true pyorrhœa alveolaris. In 289 cases the jaws did not meet properly. He points out the necessity of proper care and supervision of the temporary teeth for the sake of the children's digestion, and the preservation and proper alignment of the permanent set.

A Curious Incident.

Recently M. Rosa, of Bergamo, was examining a wounded man in the out-patient room of the hospital, when the man who had committed the assault entered and attacked the doctor. The latter was obliged to make use of his revolver and shot his aggressor in the abdomen. He proceeded immediately to extract the bullet. The wound proved not to be serious. The man was placed under arrest in the hospital.

April 11th.

SOUTH AFRICA.

Insane Persons in Prisons.

THE report of the Director of Prisons for 1912, which has just been issued, shows that during that year only 485 lunatics and suspected lunatics were received into penal institutions, as compared with 766 in the previous year. This reduction is doubtless mainly due to the operation of the Prisons and Reformatories Act of 1911, which prohibits the incarceration of lunatics in gaol in districts where lunatic asylums and public hospitals (other than infectious diseases hospitals) are provided. The reduction in the number of persons admitted to penal institutions on the ground of lunacy is especially notable in the case of Europeans. Only 72 European males and 10 European females were so dealt with in the Union prisons in 1912, as compared with 170 and 22 respectively in 1911. The numbers are still, however, large enough to call for further consideration of any possible means of avoiding the necessity for confining lunatics and alleged lunatics in the same institution with criminals. Out of the 485 cases dealt with by the prison authorities, only 318 were certified as insane and removed to lunatic asylums. The remaining 167 were discharged after a period of incarceration.

Miners' Phthisis.

Dr. W. Watkins-Pitchford, the director of the South African Institute for Medical Research, Johannesburg, delivered an interesting lecture recently on the industrial diseases of South Africa. The lecturer devoted himself almost entirely to a consideration of the facts regarding pulmonary silicosis. He pointed out that the Transvaal Miners' Phthisis Commission of 1903 was of the opinion that probably 21 per cent. of all the underground miners were actually or probably affected with silicosis; that a similar commission in 1912, after examining 3136 underground miners, found that 990, or approximately 32 per cent., were suffering from miners' phthisis in one or other of its stages, and that about two-thirds of the cases were in the stage of early or moderate fibrosis. The lecturer considered that, owing to the different manner in which the investigations of these two commissions were carried out, their respective estimates cannot be justly compared. He pointed out, however, that, although the general conditions of underground hygiene were better in 1912 than in 1903, yet the number of rock drills employed had more than trebled in the interval. The director expressed the opinion that a scrupulous obedience to the spirit of the mining regulations would have resulted in the total abolition of pulmonary silicosis from the goldfields of the Rand, but, as he naïvely put it, silicosis still remains a trammel and a menace to the gold-producing industry of South Africa. In other words, the regulations are there, but they are not properly enforced by the Government, and they are disregarded by the miners in their desire to draw big wages even at the risk of health and life.

Medical Matters in Parliament.

Dr. John Hewat recently asked in the House of Assembly what had been done to give effect to the recommendation of the House last session with regard to the appointment of a Leprosy Commission. The Minister of the Interior replied that, after careful consideration, the Government had come to the conclusion that no good purpose would be served by the appointment of such a commission, but it had under consideration proposals for extending the asylum accommodation so as to bring all cases under treatment, and that exhaustive departmental inquiries were already being made. In reply to a question a few days later from Mr. P. G. Kuhn as to whether the Government intended to introduce a Bill to consolidate the Medical Acts of the various parts of the Union, the Minister of the Interior replied that though the Government considered such legislation to be highly desirable it would be unable to introduce such a Bill during the present session.

Report of the Economic Commission.

The report of the Economic Commission, which was appointed as a result of the miners' strike in July last, has been presented to Parliament. The report is not without a medical interest. The Commission considers that the cost of living for whites is about 40 per cent. higher on the Witwatersrand than in America (the most expensive of the other countries examined) and nearly 80 per cent. higher than in any European country. Wages on the Witwatersrand are nearly 40 per cent. higher than in America (where money wages are materially greater than in any other country examined), and nearly 225 per cent. higher than in any European country. When allowance is made for cost of living as a whole it would seem that the workman on the Witwatersrand is better off than the workman in America and much better off than the workman in Europe. The report as a whole is an extraordinarily able document, and it should be of the greatest value to the Government in dealing with the many economic and industrial problems with which it is faced.

March 3rd.

AUSTRALIA.

Tenth Australasian Medical Congress.

THIS congress met at Auckland, New Zealand, on Feb. 14th, and was well attended, a considerable number of Australian practitioners making the somewhat uncomfortable sea trip. The special functions included services at the various churches on Sunday, the 15th; a reception by the President, Dr. A. Challinor Purchas, and Mrs. Purchas on the 14th;

and a congress dinner on the 16th. At the inaugural meeting there were present on the platform His Excellency the Earl of Liverpool, the Prime Minister of New Zealand, the Premier of New South Wales, the Anglican and Roman Catholic bishops of Auckland, and many other distinguished persons. Dr. Purchas delivered an address in which the advances of medical science were noted. The work in the various sections was interesting, particular attention being centred upon the care of the feeble-minded and the prophylaxis of venereal diseases. The special committee on the feeble-minded recommended the establishment of schools and a residential colony for the permanent care of those not fit subjects for asylum detention. A special committee on syphilis presented a report dealing with the evidence collected in New Zealand. The committee recommended—

1. That syphilis be declared a notifiable disease. That notification be encouraged, and discretionary but not compulsory; and that the chief medical officer of health be the only person to whom the notification be made.
2. That provision be made through the Hospital Boards to establish laboratories in the four centres where not already existent for the diagnosis of syphilis.
3. That free treatment in the public hospitals and dispensaries be provided for syphilitics.
4. That steps be taken to educate the Mercantile Marine as to the dangers of syphilis, and that provision be made for preventative treatment on the intercolonial service.
5. That legislation be enacted against the treatment of syphilitics by unqualified persons.

Many social entertainments were arranged, and everyone was delighted with the complete organisation made by the New Zealand profession for the comfort of visitors. The next congress will be held in Brisbane in 1917 under the presidency of the Hon. W. F. Taylor, M.D.

Dr. J. A. Macdonald's Visit.

Dr. J. A. Macdonald, who was the representative of the central organisation of the British Medical Association at the Auckland congress, was entertained at dinner in Melbourne and Sydney by the councils of the local branches of the Association. In Melbourne Dr. Macdonald addressed a crowded meeting of medical practitioners on the National Insurance Act.

The Fight with the Lodges.

The dispute between the medical profession of New South Wales and the Friendly Societies of that State reached an acute stage, and on Dec. 31st all lodge appointments were resigned. Many of the societies at once accepted the agreement proposed by the New South Wales branch of the British Medical Association, and others have since come in. A few groups have held out in the hope of getting outside medical attendance, but none is available. It is said that only one practitioner failed to hold to the general compact, and no practitioners from other States would apply for vacant positions, showing that the profession is strongly organised throughout Australia. In Victoria the societies are considering the terms set out by the Victorian branch, and there is practically no opposition to an increase of rates of payment. There exists, however, a strong objection to the acceptance of a wage limit, and it is possible that trouble may arise from this direction.

Invalid Pensions.

The latest Commonwealth returns show that 19,353 invalid pensions have been granted. There have been 3238 deaths and 757 cancellations, leaving 15,318 in force. These involve a yearly payment of £390,000 per annum. In 15 months under the Maternity Bonus Act a sum of £810,445 has been paid in £5 bonuses.

Lister International Memorial.

Mr. R. H. Russell, F.R.C.S. Eng., announces that Victorian subscriptions to the above fund total £94 12*s.* 6*d.*, and a draft for the amount up to Dec. 31st has been forwarded to the general secretary, Sir J. Rose Bradford.

March 5th.

Correspondence.

"Audi alteram partem."

REVERSED ACTION OF THE HEART.

To the Editor of THE LANCET.

SIR,—The practical point at the end of this letter to which I wish to draw attention must form my excuse for commenting on the curious and interesting fact dealt with in your annotation under the above heading in THE LANCET of March 28th (p. 910). The details of the case in the original supply in a measure a hiatus in the experience of cardiac motor phenomena.

Auriculo-ventricular bradycardia—the *bradycardie sinusale* of the French—is comparatively common, but, as you state, an auricular in excess of a ventricular bradycardia has not hitherto been observed. We only require now to meet with a case in which auricular bradycardia is not associated with ventricular retardation to complete the series of cardiac motor phenomena which has rewarded the careful investigation of cardiac motor disorders which has more recently characterised clinical work in this sphere. This hiatus, too, may, probably will, in time be filled.

Whether, however, a case such as that with which your annotation is concerned is to be regarded as explicable by a reversal of the heart's action may, I venture to think, be questioned. By those who regard the auriculo-ventricular bundle as a survival of the original continuous cardiac tube, such an explanation of the phenomenon referred to may appear probable, but by those who, like myself, do not regard this tract in that light, but as a later developed structure growing forwards into ventricle this interpretation is more difficult to accept. To such a relatively greater prolongation of auricular over ventricular diastole or, what comes to the same thing, a relatively greater postponement of systole in the respective chambers appears to be more reasonably explicable on the assumption of a delay in the cardio-motor nervous mechanism of the heart which governs the action of the chambers *separately*, and for the exercise of which the assumption of a reversal of muscular impulse is not necessary.

There is said, in the unique but doubtless not isolated case to which you refer, to have been no "block," presumably because normal action was after a time resumed and because the *v.-a.* (instead of *a.-v.*) interval, as it would be called in terms of myogeny, remained constant. But in one of the cardiographic illustrations in the original there are two ventricular systoles without auricular response (if the feature regarded as due to auricular systole be really so), and it is stated that full atropinisation had no influence on the peculiar rhythm. The behaviour of the heart was thus the same as that

so frequently observed in so-called "block" when the absence of response is on the part of the ventricle.

It is not unusual to find the term "block" used in the description of cases in which several auricular systoles precede a single ventricular systole and in which, nevertheless, the ventricle is not abnormally retarded and is also readily accelerable by atropine. I refer to cases of so-called auricular flutter. In the case which you annotate the use of the term "block" by the myogenist would therefore seem quite permissible. I need scarcely add that, personally, I quite agree that "block" in the sense in which that term is usually employed was absent in this, as, indeed, in all other cases, an emphatic avowal of what is for the moment a heresy, which I do not hesitate to make. I shall be in no way surprised when a case of auricular bradycardia without ventricular retardation is in due course reported and completes the evidence in favour of a neuro-muscular, not musculo-neural, automatism of the heart's action.

Practice in a scientific age is largely influenced by theory and frequently involves the use of powerful agents requiring care in their employment. Among such agents is that invaluable but double-edged weapon digitalis on which so much has been written in recent years, but without adding much to our knowledge of all that is useful in its employment as expressed by some of our predecessors. There is now, however, a tendency to sit so heavily astride the auriculo-ventricular bundle in some cases in which auricular muscular stimulus and conduction are assumed to be concerned, that there is a danger of its over-employment to the detriment of the patient. For this tendency scepticism of a muscular hypothesis is a wholesome corrective and must form my excuse for addressing you.

In writing thus I do not imply that large doses of digitalis are not occasionally required for its effective use, but that the persistence of some cardiac motor disturbances, such as massed auricular extra-systolia or flutter as I regard it, are less objectionable than the attempt to abolish them by a heroic dosage which is less likely to be employed when myogenic conceptions of cardiac action are less in the ascendant.

I am, Sir, yours faithfully,

ALEXANDER MORISON.

Upper Berkeley-street, W., April 10th, 1914.

CANCER HOUSES.

To the Editor of THE LANCET.

SIR,—The paper by Sir Thomas Oliver in THE LANCET of April 4th, and the article in the *Times* of April 6th, have drawn attention to the subject of cancer houses. In 1902, in a presidential address to the South Midland Branch of the British Medical Association, I was able to bring forward 30 instances of two or more cases of cancer living together in one house or intimately associated occurring amongst a population of 102,000 in North Bedfordshire in the decennial period 1890–1899, and in THE LANCET of Nov. 14th, 1903, I published notes of a group of five cases of cancer, three of which died from cancer of the tongue in one village within the space of 16 days. In my own practice I have had 10 instances of dual cancer.

1. A lady died from malignant disease of the sigmoid flexure of the colon in May, 1897, and in July, 1899, her husband died from sarcoma of the adductor muscles of the thigh.

2. A man died in March, 1902, from cancer of the larynx, and for the last two years his widow, who has remained in the same house, has suffered from cancer of the breast.

3. A lady in 1900 had cancer of the small intestine and ovary, which I removed, and died from a recurrence in the uterus in 1901. Her successor in the house, who was not related to her, died from cancer of the uterus recurring after removal of a cancerous ovary in January, 1909.

4. A man, aged 32, died from cancer of the sigmoid in April, 1901, and his father, who afterwards moved to another house, died from cancer of the stomach in February, 1905.

5. A lady had her breast removed for cancer in June, 1909, and an ovarian tumour in December, 1910. Now has recurrence in the glands of the neck. Her husband died from cancer of the stomach in November, 1912.

6. A woman had her breast removed for cancer in April, 1910, and her husband died from cancer of the prostate in August, 1911.

7. A lady died from cancer of the sigmoid in October, 1911, and her husband from cancer of the stomach in February, 1913.

8. A lady had her breast removed for cancer in January, 1912, and her sister-in-law with whom she lived died from cancer of the pharynx in July, 1913.

9. A man died from cancer of the hepatic flexure of the colon in October, 1910. In 1909 his sister, who lived with him, had her breast removed for cancer.

10. A man was operated on for cancer of the rectum in February, 1911, and his wife for cancer of the cervix uteri in March, 1914.

In my experience dual cases of cancer have been far more frequent than dual cases of tuberculosis.

I am, Sir, yours faithfully,

W. GIFFORD NASH, F.R.C.S. Eng.

Bedford, April 7th, 1914.

AN UNUSUAL CASE OF SELF MUTILATION.

To the Editor of THE LANCET.

SIR,—It is inconceivable that the English proverb, "To cut off one's nose to spite one's face" ever had a literal application; equally unlikely, one would think, would it be for a person to cut off his penis to spite his father. Yet such a case has quite recently come under my observation.

An elderly Brahmin of the Tiwari tribe came to the Basti District Hospital; tears were running down his cheeks, and he was carrying something in a clean rag in his hand. I asked him what was the matter, and in broken-hearted tones he described that his son was now 19 years of age and that he had been very anxious to have him married. "Now," he said, "look what he has done." On opening up the rag I found a penis—very full-sized, one might say—with a large piece of the scrotal skin attached to it. The penis had been cut off at the root and was hard and firm to the touch. I asked him where his son was, and he said he was outside under a tree. I went and saw him. He was a lanky youth, about 20 years of age, very pale and ghastly looking. I asked him how it had all occurred, and he described it as follows. His father, like all Indian fathers, was anxious to have his son married to carry on the race, and had been worrying him for some months past about it. At last in desperation he had taken a knife and cut off his penis. It was not painful at the time he did it, but the bleeding was very free. He said he had a great deal of pain now, but he was not anxious to have any treatment or to stay in hospital. He wished to become a sadhu, or holy man, and to lead the simple life, but the father was greatly opposed to it, and that was why the son had cut off his penis. The wound was full of clotted blood, but there

was no longer any bleeding. He left the hospital almost immediately and has not returned.

I am, Sir, yours faithfully,

CHARLES MILNE, M.B. Aberd.,
Lieutenant-Colonel, I.M.S.

Basti, United Provinces, India, March 24th, 1914.

UNQUALIFIED PERSONS AND MEDICAL BENEFIT UNDER THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—I am instructed to forward to you for publication in your valuable journal a copy of the following resolution passed by the Royal College of Physicians of London on April 6th in relation to the employment of non-qualified persons for the purpose of medical treatment under the National Insurance Act:—

NATIONAL HEALTH INSURANCE (MEDICAL BENEFIT) REGULATIONS, 1913.

The College observes with regret that in Section 44 (2) of the National Health Insurance (Medical Benefit) Regulations, 1913, and the Memorandum issued in connexion therewith, provision is made whereby insured persons who make their own arrangements for medical benefit under Section 15 (3) of the National Insurance Act may obtain treatment from non-qualified persons.

Hitherto none but duly qualified medical practitioners have been employed, as such, in any public capacity, and the College deplores that, under an Act professing to promote the health of the nation, recognition should be given and provision made for the payment of public money to a class of persons who have not obtained a legal qualification to practise medicine and concerning whose medical knowledge there exists no sort of guarantee.

I am, Sir, yours faithfully,

J. A. ORMEROD,
Registrar.

April 8th, 1914.

THE MODERN GAS FIRE AND HYGIENIC EFFICIENCY.

To the Editor of THE LANCET.

SIR,—I have read with much interest the article with this title in THE LANCET of April 4th, and I consider that you are doing excellent work in bringing into prominence the points in connexion with these fires which lead towards greater hygienic efficiency.

I notice that "the fires were tested in the middle of the experimenting room without any communication with the fireplace chimney." I cannot help thinking that this arrangement was hardly fair to the fires, and in any case it is not an arrangement which would be adopted in actual practice. I take it that all the fires tested (with perhaps one exception) were intended to be fixed in a fireplace with an elbow or flue leading into the chimney, and it would surely have been better to have fixed the fires in such a position for the purpose of testing them. With the arrangement adopted it is quite possible that the results of the tests made have been to some extent inaccurate in certain cases, and this would account for what would appear to be inconsistency in the results of the tests shown in the diagrams. As an instance of the inconsistency I would like to point out the difference shown between fire No. 22, Merlin (Wright), and fire No. 25, Talisman (Wright). Under the chemical test the Merlin does not show good results with even a 4-feet flue, whereas the Talisman shows perfect results under all conditions. I believe I am right in stating that the construction of these two gas fires is identical, the only difference being in the shape of the outside casing, the Merlin being round-topped and the Talisman square-topped.

It would be interesting if you could see your way to make a further series of tests with these fires connected to a chimney in the ordinary way.

I am, Sir, yours faithfully,

ARTHUR E. WILLIAMS, A.M.Inst.C.E.

Queen Victoria-street, E.C., April 6th, 1914.

*** We publish with pleasure a natural protest without admitting our inconsistency, because the two fires were not identical in every respect. It was stated in the article that the final appeal must be to the chimney and fireplace. We consider that the gas fire should leave the factory with a hygienic hall-mark, tested under the conditions described, even though they may seem unnecessarily severe.—ED. L.

"THE MENACE OF CANCER" AND AMERICAN VITAL STATISTICS.

To the Editor of THE LANCET.

SIR,—In the letter of Mr. F. L. Hoffman, of New Jersey. U.S.A., published in THE LANCET of April 11th, in which he attacks certain criticisms of American mortality statistics recently published by Dr. Bashford, reference is made to some expressions of mine on the inaccuracy of American mortality statistics as follows: "Dr. Bashford, on the authority of Oertel, claims that New York City has shown that the greatest laxity and inaccuracy obtains, owing to the neglect of the medical profession and the unwillingness of the authorities to enforce the prescribed penalties. The views of Oertel have *not been accepted by qualified critics* (the italics are mine), although justified to *a limited extent* as regards *initial* diagnosis in hospital practice, which has but an *indirect bearing* upon the terminal certification in death registration. *There is no laxity or gross inaccuracy inherent in the vital statistics of the City of New York*, which are accepted by every authority on vital statistics throughout the world. The compulsory registration of deaths has been in force in the City of New York since 1865, but for half a century previous deaths were recorded in a more or less trustworthy manner, and probably as accurately and conclusively as for most of the large cities of the world during the corresponding period of time."

It is not my practice to enter into any public controversy with those who do not agree with me, even where I am misquoted or the meaning of my statements is misrepresented, for the serious reader is most always able to refer to the originals and judge one way or the other for himself. In this instance, however, I feel that I must, in justice to Dr. Bashford and to the large number of your English readers who are probably unable to read the originals, enter a protest against a most misleading statement which bears on its surface the stamp of arrogant ignorance. It is, indeed, regrettable that Mr. Hoffman should have allowed himself to issue such a sweeping condemnation and false interpretation of my remarks without citation of, or reference to, one of the qualified critics upon whose judgment he depends. Here, then, shortly summarised, are the facts which Mr. Hoffman has left to me to supply to the reader.

In an article on the Inaccuracy of American Mortality Statistics published in the *American Underwriter* for May, 1913, I said in substance: First, that clinical or bedside diagnoses of a disease are at the best uncertain even in the hands of

experienced physicians and surgeons without objective proof of necropsy, and I demonstrated the truth of that statement not only by mine but Dr. Richard Cabot's (Boston) well-known experience (*Journal of American Medical Association*, Dec. 28th, 1912, p. 2295). Secondly, that this uncertainty and inaccuracy is particularly great in the United States of America, where the importance of necropsies and the study of pathological anatomy which are indispensable to good diagnostic ability have always been grossly neglected. Consequently the American physician generally lacks that objective knowledge of disease which is found where a greater opportunity for studying diseases directly from the cadaver is offered. The disastrous result of this lack of knowledge is necessarily poor diagnostic and critical ability. (I might interpolate that herein rests the great advantage of English and continental medical training.) Now, in order to support this statement by objective evidence for the layman, such as Mr. Hoffman, I selected the largest and most important public hospital in New York City, a hospital used as a teaching institution by the three most important medical colleges in New York and in which good attending physicians and reasonably good records are to be expected, and obtained the results tabulated below. In these cases *not* the *initial* diagnosis, as Mr. Hoffman would have us believe, but the clinical diagnoses *available at the time of death* were compared with the anatomical diagnoses. During the year 1912 this hospital had 3170 deaths, of which only 482, or 15·2 per cent. came to the test of a post-mortem examination—a very small number compared to the 80 to 90 per cent. of necropsies in European hospitals. The records of the 482 consecutive necropsical cases were used for a comparison of clinical and necropsy findings. Of these 92 were infants. In practically all these latter the necropsy disclosed important lesions not suspected, but the clinical observation had been too brief for accurate diagnosis, and they were for that reason not included in the following classification for comparison of post-mortem and clinical diagnosis.

	Cases.	Per cent.
I. Clinical diagnosis confirmed	87 ...	22·3
II. Clinical diagnosis correct, but necropsy disclosed important additional lesions. (Example: Lobar pneumonia diagnosed correctly, but necropsy showed cancer of the uterus in addition)	116 ...	29·7
III. Clinical diagnosis partly correct, but other important lesions that had contributed to the diagnosed lesion were found. (Example: Acute peritonitis diagnosed correctly, but necropsy showed a perforated gastric ulcer) ...	54 ...	13·8
IV. Clinical diagnosis not confirmed	109 ...	27·9
V. No clinical diagnosis	24 ...	6·2
	390 ...	99·9

It will be seen that the necropsy confirmed the clinical idea of the diseased body in 87 cases only of 390, while in the majority the post-mortem examination revealed important additional evidence, which in a considerable number put the case in an entirely different light after necropsy. ..... Now, when it is further considered that in 133 cases of 390, or 34·1 per cent., diagnosis was either entirely wrong or not made at all, and that in some cases *the clinical diagnoses are recorded after necropsy had been performed*, it will be seen how uncertain or even misleading would be any statistics made up of clinical diagnosis or records alone. Consider further that we possess in this instance only the necropsied records of 482 cases in 3170 and apply the same ratio of comparison to the remaining unnecropsied cases, and that the death certificates do not even show what cases have been confirmed by necropsy, would anyone attempt to use figures or data obtained from such material for serious consideration? Still these figures represent the work of a large public institution used for teaching purposes, with which prominent physicians and surgeons are connected and in close affiliation with medical colleges of excellent reputation. In a subsequent paragraph I added: We move under present conditions (in America) in a vicious circle; our clinical records and death certificates are poor, because our physicians lack the objective training that can be derived only from necropsies and competent teachers. We cannot expect to improve in these respects until this training and knowledge become greater.

Thirdly, I enumerated and mentioned in detail many instances which illustrated the prevalent lack of consideration and responsibility of physicians as well as heads of institutions in regard to the recording of accurate statistics. I quoted from my own rather extensive experiences with the public service in New York and from some other States, and I may say mildly, for I did not propose to create a public scandal, which certain of my evidence certainly would have done, but endeavoured to impress upon physicians, State and municipal officials, and the public alike, the actual state of affairs and the urgent necessity for reform. For this reason I did not, for instance, go into the well-known incompetency and the disgraceful conditions of the coroners' office in New York and many other cities, an office which is responsible for practically all death returns in cases of sudden and "unusual" death, and I even avoided mentioning the powerful influence which the mass of mediocre, ignorant and unfit physicians, whose existence we owe to the inferior and vile medical schools and low educational standards (so well exposed by the Carnegie Foundation), must have on the correctness of death returns in the United States. Even the present State examination in New York stands on a relatively low level as regards testing a man's real knowledge and fitness to practise. It consists of written questions which may be answered with the knowledge of cram catechisms. There exists neither an oral nor a practical test, and a man may be allowed to enter practice in New York who cannot tell the section of a liver from that of a spleen. How can one trust the death returns under such conditions?

What I said in my article was, it will be appreciated by all well acquainted with American conditions, not new, but really only a repetition of general knowledge, and recorded once more the well-recognised results of the American wretched educational system which, combined with an unrefined political system, has been a serious drawback to American science and progress.

These views, says Mr. Hoffman, have not been accepted by qualified critics. I do not know who these are, for Mr. Hoffman, in a manner somewhat unusual in scientific controversy, does not even consider Dr. Bashford worthy of references to verify his statements, but I do know that they have been keeping their criticisms very quiet or published them by private subscription only in which I have not been included. On the other hand,

Professor Graham Lusk, in a paper read at the International Medical Congress in London last summer on Medical Education in the United States,[1] says, in referring to the scarcity of necropsy experience in the State and City of New York: "If the physician were sure that, in case of death, his diagnosis would be checked by the pathologist, he would be likely to exercise greater care in his work, and he and his pupils would learn to better understand the limitations of diagnosis. Also, the value of vital statistics would be immeasurably enhanced. And further, this very ill-advised policy on the part of the law-making power (he refers to the severe restrictions in performing necropsies in New York) has had a further effect of discouraging pathological morphology, so that many pathological laboratories have turned attention to experimental pathology, &c. ..... The enforced neglect of morphological pathology has been a grave obstacle in the path of medical progress." There are other statements in Professor Lusk's article which may be read with profit in this connexion—for example, that as recent as 1912 the authorities of the State of Tennessee presented the spectacle of licensing 175 (!) individuals who were not graduates of any medical school whatever, and there are several other States in which it is not even necessary that an applicant for medical licence be a graduate of a reputable medical college. (Few States required any State examination before 1890, many even of the Eastern States not until after 1890.) Furthermore, in 1904 (!), when the Council on Medical Education of the American Medical Association began its activities, there were 166 medical schools in the country. Now there are, fortunately, only (!) 110, in contrast with 21 in England, 20 in Germany, 20 in Italy, and 5 in France; and the Council ranks (1913) only 21 in Class A plus as acceptable medical colleges well organised and thoroughly equipped, giving acceptable courses and requiring for admission one or more years of university science. This is really not, as will be seen, an exceptionally high standard, and this list of 21 does not include some of the New York State and City schools, and is silent about the standards of homœopathic and eclectic institutions and their contribution to the medical proletariat.

Enough has been said, I think, to show again that any statistics based on returns from an uncertain medical profession of such a heterogeneous composition covering a vast territory, difficult to control, largely poorly trained in general knowledge and in anatomical diagnosis in particular, must be taken very cautiously. As pointed out by me, even in New York City and State and some of the other Eastern States conditions are far from satisfactory.

I cannot take up more space of your valuable journal, but I think that if Mr. Hoffman would investigate conditions seriously he would find that the foundations for his statistical conclusions rest on very thin ice. His manner of disposing of my utterances and recommendations and the general misinterpretations which he gives them show that he is far from a scientific understanding of his material. What is more serious, his letter shows both the inaccuracy of passionate annoyance and the tendency to hasty generalisation with which an unfortunately still too large class of Americans resent any criticism of their institutions whatsoever. I am, Sir, yours faithfully,

St. James's-street, S.W., April 11th, 1914. HORST OERTEL.

[1] Science, N.S., vol. xxxviii., No. 980, pp. 491-499, Oct. 10th, 1913.

THE FACULTY OF MEDICINE OF THE UNIVERSITY OF LONDON AND EXTERNAL STUDENTS.

To the Editor of THE LANCET.

SIR,—As one of the oldest medical representatives on the standing committee of Convocation I have taken a deep interest in your leading article on this subject of March 21st, and in Dr. Graham Little's two letters that have appeared in your columns. I find myself very much puzzled to reconcile two statements of fact. You say explicitly that all the medical schools but one urged the abolition of the external degree in medicine. The division taken at the last meeting of the Faculty, we are told by Dr. Little, was so close that the transfer of one vote would have produced an absolute equality. Dr. Little in his earlier letter, with its informing analysis of the composition of the Faculty, demonstrated that it consisted almost exclusively of teachers in the incorporated colleges and schools. How is it, then, that the enormous disparity of opinion indicated by your statement is not reflected in the division of the Faculty?

I have a further personal interest in the matter, for as an old Guy's man I am sorry to think that my school may be included in the majority which urged the abolition of the external degrees. This would be a singularly ungracious act, for had it not been for the opportunities provided by these, Guy's would have been deprived of two of its best teachers in my time. The career of one of these, my dear friend the late Dr. Wade, offers one of the most powerful of concrete arguments for the retention of the external degree.

I am, Sir, yours faithfully,

April 10th, 1914. A. PERCY ALLAN.

*** The facts are as stated in our leading article. We refer our correspondent to the Final Report of the Royal Commission on University Education in London, Part IV., p. 179, and to the Appendix to the Fifth Report of the Commission, p. 85 *et seq.*, and p. 142. The statement of evidence given on behalf of Guy's Hospital appears in this Appendix.—ED. L.

THE DEPENDENCE OF ARTHROPATHY ON NERVE INFLUENCE.

To the Editor of THE LANCET.

SIR,—I have read Dr. P. W. Latham's letter in THE LANCET of March 28th with much interest, and am glad to see that he has again brought forward evidence to show that affections of nerves may be followed by a condition resembling rheumatic arthritis or even rheumatoid arthritis. I cordially side with him in all he says, and for many years have carried out the treatment he advocates. I continue to do so, and the more I see of it the more convinced I am that it is one of the most powerful measures at present known for combating intractable arthritis and neuritis. I can readily call to mind two striking cases.

1. The patient was a man, aged 66, who fell down a long flight of steps and injured his left shoulder badly. There was no fracture, and the exact nature of the effects of the accident was never made out. The forearm and hand swelled within a comparatively short time and pain was an early symptom, both in the joint and along the whole arm. As time went on the upper arm wasted, the forearm became œdematous, and the joints of the fingers assumed a rheumatoid aspect. Pain increased in severity in spite of treatment, including massage. The patient emphatically stated that

the latter made him worse. The general health became seriously impaired. At the end of three months he was sent away for change of air and came under my care. I applied a large blister on his back on the left side of the upper dorsal vertebræ, and subsequently kept the raw surface open by means of savin ointment. The effect was most gratifying. Within a few days pain became less and eventually ceased. Six months later the patient wrote saying he was in excellent general health and had a useful arm. In this case, whatever else may have happened, I am certain there was severe neuritis of the brachial plexus.

2. A similar case. Patient aged 57. He fell twice from his bicycle, injuring his left shoulder each time. As in the former case, œdema of the forearm and a rheumatoid condition of the hand set in. Pain became so intense the patient was at times delirious. At the end of about three months he also was sent away from home and I took charge of him. I again resorted to a large blister as before. The result was equally gratifying for a time, but subsequently the head of the humerus became sarcomatous.

In each case a celebrated consultant was called in before I saw the patient, but his suggestions led to no relief of suffering. I mention this in no spirit of vainglorioiusness, but merely to emphasise the fact that the blister succeeded when all else had failed. It is generally acknowledged that pain means tension, and in my opinion a blister relieves tension.

Dr. Latham refrains from any suggestion as to why joints become rheumatoid when their nerve-supply is impaired, and makes no mention of germs. I feel strongly that these cannot be put aside. Whatever else may be going on in a swollen joint there is beyond all question a local accumulation of toxins. Germs are a source of extremely irritating toxins, and as no living man is ever germ-free, toxins are being constantly produced in his system. There are many who believe that the application of a blister is followed by an increased leucocytosis and production of antibodies. I personally believe that both micro-organisms and toxins are freely extruded through the raw surface produced by a blister, especially if savin ointment is applied once or twice daily as long as necessary.

I am, Sir, yours faithfully,

Bournemouth, April 3rd, 1914. W. J. MIDELTON.

CHANGES IN THE BLOOD IN SURGICAL SHOCK.

To the Editor of THE LANCET.

SIR,—I think one is justified in expressing considerable surprise at the nature of the admission made by Mr. A. Rendle Short as to his CO_2 estimations. In his original article he describes his technique in these words: "A bandage was tied round the patient's arm, and the skin sterilised with iodine." He now states that only in certain cases was such a bandage applied. What is to be thought of physiological observations in which it is regarded as immaterial whether a profoundly disturbing factor is introduced or not? Mr. Short passes the matter over lightly by suggesting that as the bandage was only applied for about a minute, the blood could not have received much additional CO_2. May I refer him to a paper published in THE LANCET of June 19th, 1909, p. 1741, in which Dr. A. P. Beddard, Dr. M. S. Pembrey, and Dr. E. I. Spriggs record the observation that by bandaging the arm for two minutes they could raise the CO_2 content of the venous blood from one-fifth up to the normal value. As Mr. Short describes the sterilisation of the arm with iodine after the application of the bandage, is he really certain that these operations occupied only one minute?

It may here be remarked that, apart altogether from the matter of bandaging, the CO_2 of the venous blood is a very variable factor, and differs widely in different regions. There are other disturbing factors, so that at best merely a rough estimate is possible from these examinations as to the CO_2 content of the arterial blood. A more accurate method is by analysis of the alveolar air, an impossible proceeding, of course, in Mr. Short's cases. Hürter,[1] however, has shown that blood may be easily and safely taken from the radial artery.

The real object of my note was not to uphold the acapnia theory as opposed to the theory of Crile, but merely to point out a source of fallacy in Mr. Short's protocols. As to the general question, there is a tendency to lose sight of the fact that there are different kinds of shock, and the causes are correspondingly diverse. If any one should doubt, for instance, that shock is associated (to put it at the lowest) with acapnia, let him maintain forced breathing for a sufficient number of minutes, and then after recovering his senses he will remain a sceptic no longer. In surgical shock the degree of acapnia present may be roughly guessed by observing the antecedent pulmonary ventilation. Now in the experiments of Janeway and Ewing, to which Mr. Short refers, and which, by the way, were first published in the *Biochemical Journal* for April, 1913, shock resulted just the same when the CO_2 content of the blood was artificially maintained. Seelig[2] also found that the injection of CO_2 into the veins did not prevent shock artificially induced in dogs. The contention of Janeway and Ewing is that the shock in artificial hyperrespiration was due to inhibition of the venous return to the heart. But here let it be noted that the intra-pulmonary air pressure induced in these experiments was enormous, sufficient practically to empty the thoracic veins, and therefore by no means comparable to the natural hyperrespiration which takes place in the human subject. Accordingly, the relationship of acapnia to shock in man is not disposed of in such experiments.

The adoption of "spinal" shock by Mr. Short as supplying the clue to surgical shock is to my mind rather unfortunate. Both Yandell Henderson and Janeway and Ewing found the bulbar centres perfectly active, and so the latter authors fall back on "local peripheral causes."

I am, Sir, yours faithfully,

A. G. AULD.

Henrietta-street, Cavendish-square, W., April 4th, 1914.

THE LATE COLONEL J. O. WILL, R.A.M.C.

To the Editor of THE LANCET.

SIR,—We venture to appeal to the charity of those members of the medical profession who are in a position to render help to the widow and family of the late Surgeon-Lieutenant-Colonel J. O. Will, R.A.M.C. The deceased leaves an honourable record of work done in many parts of the Empire. Among many who personally tendered to him their thanks for valued services were the late General Wauchope in South Africa and Sir F. M. Hodgson in St. Vincent after the disastrous eruption in that island.

Early in this year Dr. Will, having retired from the Army, purchased a practice in the village of Dunton Green, near Sevenoaks. After only seven

[1] Archiv für Klinische Medicin. 1912, cviii., I.
[2] American Journal of Medical Sciences, August, 1913.

weeks he fell a victim to pneumonia. The evening before his death his eighth child was born, the mother's mental and bodily suffering being increased by a perilous obstetric complication. The widow is left with a family of eight to bring up, the eldest being a girl of 16. A yearly allowance to be made by the War Office represents practically her entire income; under the circumstances no great sum can be expected from the sale of the practice, which was a small one. Her only relatives are not in a position to afford substantial aid; and we feel that many medical men would like to do what is in their power to help.

The Rev. E. Mort, vicar of Dunton Green, has opened a fund, and any contributions we may receive as a result of this appeal will be added to it and thankfully acknowledged.

We are, Sir, yours faithfully,

JAMES E. BLOMFIELD, M.A., M.D. Oxon.
R. J. DICK, M.D. Edin.
GERALD SICHEL, F.R.C.S. Eng.

Sevenoaks, April 14th, 1914.

THE SCHOOL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—It may not have come to the knowledge of some school medical inspectors or assistant school medical officers that an organisation has been formed within the Society of Medical Officers of Health with the object of safeguarding and forwarding their general interests.

On Saturday, May 2nd, at 2 P.M., it is proposed to hold a meeting at 1, Upper Montague-street, Russell-square, W.C., for the purpose of bringing together all those of the above classes who work in the metropolitan area—i.e., in Greater London or neighbourhood. To the rank and file of school medical workers there will be no need at the present juncture to labour the necessity of having some organisation adequately to press their claims, hitherto somewhat overlooked. It is therefore sincerely to be hoped that all those, of whatever rank, who are interested in the present and future welfare of the school medical service will strain a point to attend at the time specified. Those who cannot do so will materially help by sending their names and any suggestions they wish to make to me.

I am, Sir, yours faithfully,

S. B. WALSH.

Hampden Club, Phœnix-street, N.W., April 14th, 1914.

DONATIONS AND BEQUESTS.—By will the late Dame Sarah Annabella Boughey, of Sundorne Castle, Shrewsbury, bequeathed £15,000 for the purchase of land and the erection thereon of a cottage hospital at Newport, Salop, to be called the "Annabella, Lady Boughey Cottage Hospital."—The following institutions will benefit under the will of the late Mr. Frederick Ingle: British Home and Hospital for Incurables, Streatham, £1000; West London Hospital, £1000; St. Luke's House (Home for the Dying Poor), £1000; Maternity Charity and District Nurses Home, Plaistow, £500; Miller General Hospital, Greenwich, £500; Victoria Hospital for Children, Chelsea, £500; All Saints' Hospital, Vauxhall Bridge-road, £500; Westminster Hospital, £550; Western Ophthalmic Hospital, £500; Bolingbroke Hospital, £500; and Metropolitan Convalescent Institution, £500.—Under the will of Mrs. B. S. Grewcock, of Pershore, University College Hospital, London, receives £1500 for the endowing of a bed to be called the "John and Bridget Grewcock Bed," and a similar sum is received by Epsom College for the provision of pensions "for retired legally qualified medical men who from old age, permanent incapacity from illness, reduced circumstances, or other causes in the opinion of the Council are in need of such allowance or pension."

THE NATIONAL INSURANCE ACT.

THE STATE MEDICAL SERVICE ASSOCIATION.

A PUBLIC meeting was held recently in London at the Essex Hall by the State Medical Service Association, under the presidency of Sir George Kekewich, when Sir John Collie moved the following resolution:—

That this meeting, being of opinion that the present arrangements for the prevention and treatment of disease are wholly inadequate to the needs of the community, calls upon the Government to establish a complete State Medical Service, freely available to all, as the only means by which the health of the nation can be efficiently maintained.

Sir John Collie, in proposing the resolution, dwelt upon the difficulties attending the prevention of malingering under the Insurance Act and of consequent excess of disbursement on sickness benefits. He spoke of the institution of a medical service as inevitable when the dependents of those now insured became entitled to medical attendance. Professor Leonard Hill, in seconding the resolution, dwelt upon the advance of medical science in the direction of prevention, and advocated a medical service as a means of combining the prevention with the treatment of disease. Mr. A. G. Gardiner and Dr. A. Salter also spoke, the latter describing the difficulties which under existing circumstances tended to render inadequate the supply of medical men in working-class districts. He further pointed out that whereas the Chancellor of the Exchequer had estimated that about 30 per cent. of the insured patients on a practitioner's list would be attended by him in the course of a year, the secretary of the British Medical Association had estimated that in the light of experience about 65 per cent. would be much nearer the mark. According to the speaker's personal experience in his own practice and of that of other medical practitioners in the East-end, from 82 to 92 per cent. of the insured had to be seen in the year. In order to provide the necessary increase in the numbers of the medical profession he recommended the democratisation of the profession, and made suggestions as to the lines upon which education for this purpose might be arranged. The resolution was carried.

MANCHESTER INSURANCE COMMITTEE AND CRITICISM OF PANEL PRACTICE IN MANCHESTER.

Dr. T. A. Helme, at a recent meeting of the Manchester Insurance Committee, made a vigorous speech with regard to the allegations of inadequate medical service at Manchester, the consideration of which has been referred to a subcommittee. Resolutions of the Medical Committee were read, calling the Insurance Committee's attention to (*a*) the insufficiency of medical remuneration, the income available having proved hitherto less by £70,000 than what would be necessary to pay medical men on the panel on the official scale arranged; (*b*) the insufficiency of the drug fund to provide and in particular to its inadequacy for the provision of the most appropriate remedies for many serious cases; (*c*) unfair charges publicly made of malpractice and careless treatment, resulting in resentment and consequent lack of interest in insurance work on the part of medical men. Dr. Helme declared that patients had been given under the Act as good treatment as they had enjoyed as private patients

before it. He impugned the honesty of the attacks made upon the medical profession. The allegations were untrue in fact and unfair in the manner in which they had been made. The medical practitioners themselves had constituted a special committee for the sifting of complaints carefully and dispassionately round a table where laymen and medical men would do their best for the insured. The persons making charges had not used the official means provided for the purpose, and he would challenge them to bring definite cases before the committee. He made on behalf of the medical profession in Manchester a cordial offer to them to do their very best to make the Act a success if possible. After the chairman had made some observations it was resolved to refer the resolutions of the Local Medical Committee to the Special Committee already appointed.

BRISTOL INSURANCE COMMITTEE.

At its last meeting this committee considered several matters of medical interest. The chairman said that, in response to a request for information offered by some of the panel practitioners, the remuneration per visit had been calculated on a wide and representative basis. It worked out at about 1*s.* 4½*d.* per visit. Negotiations are proceeding for the allocation of those persons who have not yet chosen a doctor. A resolution devoting the unallocated funds formed by the allowance for these persons to the provision of home nursing and other benefits for the insured was carried by a large majority; an amendment proposing its delay for further consideration of the claims of the panel to receive this money being negatived. It was stated that premises accommodating about 24 patients would shortly be open, in addition to those already available, for the reception of tuberculous patients for sanatorium treatment.

PANEL PATIENTS AND EXTRA FEES.

At a meeting of the Leicestershire Insurance Committee a resolution was passed to the effect that medical men on the panel should be reminded by a recommendation forwarded by the Committee that insured persons on their lists were entitled to the benefits provided by the Act without charge, and that it should be intimated that the committee would view with disfavour any suggestion made by any medical man that patients should make any additional payment.

LEICESTER ROYAL INFIRMARY.—The opening ceremony of the reconstructed Children's Hospital in connexion with this institution will be performed by the Hon. Mrs. G. Murray Smith, on Wednesday next, April 22nd, at 3.15 P.M.

BRITISH HOSPITALS ASSOCIATION.—The fifth annual conference of this association will be held at Newcastle-upon-Tyne from June 18th to 20th, 1914. The Lord Mayor of the city (Councillor Johnstone Wallace, J.P.) will preside and deliver an address, and various papers dealing with hospital matters will be read and discussed. Full particulars of the conference will be announced in due course.

Mr. H. W. Armit, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Editor of the *Medical Journal of Australia*, and will leave England to take up his duties this month. The *Medical Journal of Australia* will replace the existing *Australasian Medical Gazette* and *Australian Medical Journal*, and the offices will be situated in Sydney, New South Wales.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At the Quarterly Examination in Practical Pharmacy, held on April 2nd, the following candidates were approved:—

Finlay Cameron, King's College and Charing Cross Hospital; Hugh Collins, Madras and London Hospital; Eric David Despard Davies, Cambridge University and St. Mary's Hospital; Frederick Graham Leslie Dawson and George Stanley Deane, London Hospital; Horace Silva Drabble, Sheffield University; Hassell Dyer Field, St. Thomas's Hospital; Luis Hernando Garces, London Hospital; Ralph Byron Gibson, Sheffield University; Arthur Dodsworth Haydon, Cambridge University and St. Thomas's Hospital; Arthur Maddock Jones, Charing Cross Hospital; Tom Jones, Cambridge and Manchester Universities; Theodore Louis Kan, King's College and St. Thomas's Hospital; Felix Edward Ricardo Laborda, Guy's Hospital; Constantine Lambrinudi, Cambridge University and Guy's Hospital; Eric Delafield Lindow, King's College Hospital; Archibald Daniel Marston, Guy's Hospital; Benjamin Robert Mayman, King's College Hospital; Bhamini Mohan Mitra, Calcutta and Middlesex Hospital; Leonard William Mortimer, London Hospital; Noel Spencer Nairne, St. Thomas's Hospital; Guy William Parry, St. Bartholomew's Hospital; Sachchidananda Hosen Paul, Calcutta and Charing Cross Hospital; Frederick Stanley Lawrence Piggott, Cambridge University and St. Thomas's Hospital; Herbert Sharpe, Cambridge University and Guy's Hospital; Bawa Harkishan Singh, Lahore Medical College and Middlesex Hospital; Robert Masters Somerset, Sheffield University; Frank Hugo Stuttaford, St. Mary's Hospital; Samuel Leon Szpigner, London Hospital; Karl Johan Fredrick Westman, Guy's Hospital; Henderson Whyte, London Hospital; and Thomas Wilson, Manchester University.

LONDON SCHOOL OF TROPICAL MEDICINE.—The following were the successful candidates at the examination held at the end of the forty-fourth session (January–April, 1914):—

G. G. Jolly (Colonial Service) and N. S. Williams (with distinction), G. M. Millar (Colonial Service), C. J. B. Pasley (Colonial Service), A. L. Fitzmaurice, V. StJohn Croley, J. Marmion, I. Ridge-Jones, S. Colyer, S. F. Chellappah, Bernard Haigh, E. Gibson (Colonial Service), Miss E. N. M. Ross, and J. H. Castro.

UNIVERSITY OF GLASGOW. — At the Final Professional Examination, held recently, the following candidates were successful:—

Robert Armstrong, George Flett Barr, Robert William Brander, William Hunter Brown, Ethel Crawford, Robert Frew, Adolph Robert Hanns Geyer, Alexander John Gibson, Thomas Gilchrist, David Hardie, John Wishart Welsh Hewitt, David Johnston, George Smith Livingston, Daniel Steel M'Bean, Charles Robertson M'Intosh, Jessie Gordon M'Laren, Neil Macleod, Frederick William M'Millan, Robert Martin M'Minn, Ewen Stewart Macphee, James Kennedy Manson, William Strelley Martin, Walter John May, William Meikle, Alexander Dryden Moffat, William Luddington Peacock, John M'Lean Pinkerton, David Reid Eccles Roberts, Robert Cecil Robertson, Stanley Robertson, Stuart Robertson, Stuart Dewar Robertson, Archibald M'Kerrow Russell, John Fraser Steven, Henry Stewart, John Symington Stewart, Ronald Stewart, Ian Dishart Suttie, Robert Tennent, Robert Noel Thomson, William Thomson, John Cuthbertson Walker, Henry Currie Watson, Sara Adam Watson, Grace Birrell Whish, Alexander Sweet Wilson, and Thomas Wilson Wylie.

At the examinations for the degrees of M.B. and Ch.B. the following candidates passed with distinction in the subjects indicated:—

Zoology and Chemistry.—James Rognvald Learmonth, Peter Alexander Mackay, John William Peden, and Agnes Petrina Routledge.
Botany.—Donald Maclean.
Zoology.—John Barlow, Barclay Barrowman, Thomas M. Burton, Margharita Mary Lamont Couper, John Donald, William John Ferguson, Grace Anderson Fleming, Tom Osborne Howie, Robert Ebenezer Kerr, Elizabeth Cochrane Loudon, and Isabella Quarrier M'Fadzean.
Physics.—Thomas Robertson.
Chemistry.—Isaac Ladipo Oluwole.
Anatomy and Physiology.—Thomas Arthur Letters.
Materia Materia and Therapeutics.—David Campbell and Clive Alan Whittingham.
Pathology and Medical Jurisprudence and Public Health.—Ernest M'Murchie Dunlop.
Pathology.—John Mandeville Macfie.
Medical Jurisprudence and Public Health.—John Glaister and John Desmond Milligan.
Surgery and Clinical Surgery and Practice of Medicine and Clinical Medicine.—Robert Tennent.
Surgery and Clinical Surgery.—George Flett Barr, Stanley Robertson, and Stuart Robertson.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.—At examinations held recently the following candidates passed in the examinations as undernoted.

Preliminary Examination.—Daniel Casey, Baron Asher Cohen, Edward Patrick Connolly, David Clein, John Duffy, Joseph Forbes, John Francis Gallagher, Thomas Philip Harpur, Daniel Hegarty, Thomas Joseph Hurley, John Joseph Lee, James McAleer,

Thomas Fulton McCay, Christopher MacCormack, Peter Eugene Macnamara, Thomas F. Minford, Victor Franz Von Nauman, Joshua Pousner, Patrick Joseph Roddy, and Louis Scher.

First Professional Examination.—Henry Bell, William E. Cooke, Thomas N. D'Arcy, Sylvester J. Healy, Timothy Lynch, Thomas H. K. McLoughlin, Victor J. J. O'K. Murphy, Carl O'Connor, Bernard F. O'Reilly, and Gilbert R. Wilson.

Second Professional Examination.—M. Briscoe (with honours), J. P. Morgan (with honours), J. F. Seale (with honours), D. J. Steele (with honours), J. H. Barrett, J. J. Bourke, G. H. M. Crofts, W. O'C. Hunt, H. Levison, and J. E. Lucas.

Third Professional Examination.—C. H. Brennan, W. E. R. Dimond, J. A. Fretton, J. A. McKinnon, A. C. McQuaide, G. M. Moffatt, T. F. Moran, V. A. Power, R. O'C. Redmond, A. P. Reilly, N. E. Stephens, and M. A. Sullivan.

Final Examination.—Charles M. G. Campbell, Ernest Connell, James J. Donegan, Joseph J. Elliott, Edward Green Foley, John M. Gilmor, William Lumley, Louis L. McKeever, John A. O'Driscoll, Patrick J. O'Reilly, James J. Reynolds, and Robert P. Weldon.

Diploma in Public Health.—Henry Blyth, M.B. Edin., Capt. Howard Crossle, I.M.S., M.B. Dub. (with honours), and Henry Lloyd, M.D. Durh.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND TUBERCULOSIS.—We are asked to say that the "statement concerning the infectivity of tuberculosis," which was adopted by the council of the College at its last Comitia and summarised in our report last week, can be had on application at the College, Pall Mall East, London, S.W.

THE ROYAL SANITARY INSTITUTE.—A lecture will be delivered at 90, Buckingham Palace-road, S.W., on Wednesday, April 29th, at 5 P.M., by Dr. E. F. Bashford, director of the Imperial Cancer Research Fund Laboratory, on "The Bearing of Comparative and Experimental Investigations on the Association of Cancer with Chronic Irritation."

HUNTERIAN SOCIETY.—The last meeting of the session will be held on Wednesday next, April 22nd, in the library of St. Bartholomew's Hospital. After the election of officers for next session, the winner of the society's annual medal, Dr. B. T. Parsons-Smith, will read a paper, founded on his prize essay, and dealing with the intermittent pulse. The society's silver medal and certificate will then be presented to him by the President.

GUY'S HOSPITAL.—An invitation is extended to medical men to attend a course of six lectures on "Industrial Medicine," to be delivered at the Medical School of this hospital by Dr. Frank Shufflebotham, lately Milroy lecturer on that subject at the Royal College of Physicians of London. The lectures will be given on Fridays at 4 P.M., commencing on May 8th, and will be illustrated by the epidiascope, by pathological specimens, and by clinical cases.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Easter Holidays.

THE House of Commons adjourned on Wednesday, April 8th, until Tuesday, April 14th, for the Easter holidays.

HOUSE OF COMMONS.

TUESDAY, APRIL 7TH.

Uncertified Deaths.

Mr. HIGHAM asked the President of the Local Government Board what was the statutory authority for the amended regulations recently issued by the Registrar-General on the subject of uncertified death; whether the regulations had been advertised in the *London Gazette*, in pursuance of Section 44 of the Registration Act 1874, and, if not, why were they not so advertised; and whether the regulations forbade registrars to register such deaths until they had been dealt with by the coroner, or whether it was intended that the registrar should register such deaths as heretofore, and then report them to the coroner, if this had not been done already.—Mr. HERBERT SAMUEL replied: The statutory authority for the regulations referred to is Section 5 of the Births and Deaths Registration Act, 1836, which does not require their publication in the *London Gazette*. As regards the last part of the question the new regulations follow the previous regulations in providing that in all cases in which the registrar reports to the coroner he must await the coroner's decision before registering the death.

WEDNESDAY, APRIL 8TH.

Flies as Carriers of Infection.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether his attention had been called to the warning recently addressed to the public by 123 medical officers of health as to the prevalence during the summer months of infantile enteritis and other diseases traceable to the common house fly, and the increased human mortality consequent thereon; and whether the Board were taking any, and if any what, steps to effect the reduction of the fly population and of the diseases caused thereby.—Mr. HERBERT SAMUEL replied: The answer to the first part of the question is in the affirmative. As regards the last part of the question the Local Government Board are fully alive to the importance of this matter. They have issued six reports on flies as carriers of infection. They have warned local authorities by circular both in 1911 and 1913 of the danger of allowing accumulations of refuse which may form breeding grounds for flies to remain in their districts, and they have for some time been urging individual local authorities who are not dealing satisfactorily with the refuse of their districts to improve their methods.

Medical Officers of Health in Scotland.

Replying to Mr. ASTOR, Mr. MCKINNON WOOD (Secretary for Scotland) wrote: In Scotland there are 134 medical officers of health. Of these, 33 are full-time officers and 101 are part-time officers. Of the whole-time officers 16 have salaries of £500 or over and the remainder receive less than £500.

Sleeping Sickness in East Africa.

During the debate on the East African Protectorates (Loan) Bill, Mr. L. HARCOURT (the Colonial Secretary) mentioned that inquiries were still being made by a committee at the Colonial Office into the subject of sleeping sickness in East Africa. It presented a difficult problem, which was also being investigated on the spot. He warned honourable Members against running away with the idea that game or domestic animals were the only carriers of the disease.

TUESDAY, APRIL 14TH.

Funds for Sanatorium Purposes.

Mr. MONTAGU (Secretary to the Treasury) informed Mr. F. HALL (Dulwich) that the question of giving special facilities for loans from the Local Loans Fund for Sanatorium Purposes was under consideration.

Beds for Jews in Sanatoria.

Mr. GODFREY LOCKER-LAMPSON asked the President of the Local Government Board whether the Jewish board of guardians had reported that there was no large increase in the total number of beds in sanatoria available for Jews.—Mr. HERBERT SAMUEL answered: The reply is in the affirmative, but no complaint has been made to me that the number is inadequate.

Domiciliary Treatment in Perth.

Mr. GODFREY LOCKER-LAMPSON asked the honourable Member for St. George's-in-the-East, as representing the Insurance Commissioners, whether the Perth Insurance Committee had so far neglected to provide domiciliary treatment for consumptives; whether this neglect had followed as a result of a conference with the Scottish Insurance Commissioners; and, if so, whether the Government would take steps to see that this necessary treatment was provided.—Mr. WEDGWOOD BENN replied: I am informed that there is no foundation for the statement in the first part of the question. Both in the burgh and in the county of Perth, as in all other parts of Great Britain, domiciliary treatment is provided for under the doctors' agreements with the Insurance Committee. No conference of the kind referred to by the honourable Member has been held, and the last part of the question does not therefore arise.

Ireland and Medical Benefits.

Mr. A. HENDERSON asked the Chancellor of the Exchequer whether he intended to make an attempt this session to secure the passage of the Bill to extend medical benefits under the National Insurance Act to insured persons in Ireland.—Mr. WEDGWOOD BENN (who replied) said: I regret that in my right honourable friend's unavoidable absence I am unable to make any statement.

Milk and Dairies Bill.

Replying to Mr. CHARLES BATHURST, Mr. HERBERT SAMUEL said that he hoped to be able to introduce the Milk and Dairies Bill shortly.

Preservatives in Cream.

Answering Mr. HUME-WILLIAMS, Mr. HERBERT SAMUEL (President of the Local Government Board) said: For the period 1909–12 inclusive legal proceedings in respect of cream containing added preservative resulted in convictions in 74 cases. Of the 74 samples of cream in question 21 contained less than 0·25 per cent. of boric acid, 39 samples contained between 0·25 and 0·5 per cent., and 14 between 0·5 and 0·75 per cent. Complete information is not available for any later period.

Mr. HUME-WILLIAMS asked the right honourable gentleman (1) whether his attention had been called to the confusion existing in the dairy trade owing to the fact that no regulations had been made defining the amount of preservative

which might legally be added to cream before it was sold; whether it was his intention to issue such regulations, and if so, when; and (2) whether his attention had been called to the fact that on August 11th, 1909, Dr. J. M. Hamill, one of the medical inspectors of his department, made a report in which he recommended that 17½ grains to the pound of boric acid might without injury to health be added to cream during the cooler months of the year and 28 grains to the pound during the months from May to October; and whether he would take that report as the basis for regulations to be issued with reference to the use of preservatives in cream.—Mr. HERBERT SAMUEL replied: I have received representations to the effect that an alteration of the regulations is desirable, and the matter is receiving my consideration. As at present advised I am not satisfied that an official recognition of a limit of preservative is desirable.

WEDNESDAY, APRIL 15TH.

Uncertified Deaths.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether his attention had been called to the recent speech of Sir Charles Cameron, M.D., formerly M.P. for the College Division of Glasgow, when presiding at the annual meeting of the Cremation Society, in which he protested against the scandalously lax requirements of the burial law which afforded every facility for the concealment of crime and conduced to the compilation of worthless statistics, and alleged that death certificates given by medical practitioners were filled up in a most perfunctory manner, too often on hearsay and without personal knowledge, and that many thousands of deaths were each year registered which were not certified by any medical practitioner; whether, in the opinion of his advisers, such allegations were well-founded; and, if so, whether it was proposed to introduce legislation dealing with this matter.—Mr. HERBERT SAMUEL said in reply: I have not seen a report of the speech referred to. Under a recent Regulation issued by the Registrar-General uncertified deaths are required to be reported to the coroner. With respect to the last part of the question, the Registrar-General is considering the question of what amendments are desirable in the law relating to the registration of births, deaths, and marriages, but I am not at present in a position to made any statement as to legislation on the subject.

Mr. BATHURST: Is the right honourable gentleman not aware that death certificates are given in a very unprecise manner by medical practitioners at the present time?—Mr. HERBERT SAMUEL: I would not be prepared to make any sweeping condemnation of the manner in which medical practitioners perform the duties cast upon them, but I have no doubt that there are defects in a certain number of cases.

BOOKS, ETC., RECEIVED.

BELL, G., AND SONS, London.

Demonstrations on Infant Care, for Elder Girls. By Mrs. K. Truelove. With Introduction by Lady St. Helier. Price 8*d*.

BUTTERWORTH AND CO., London, Sydney, Calcutta, and Winnipeg.

A Digest of the Law and Practice Relating to Local Government in England and Wales (including London). By Arthur D. Deane and E. J. Rimmer.

Genito-Urinary Diseases and Syphilis. By Edgar G. Ballenger, M.D., Adjunct Clinical Professor of Genito-Urinal Diseases, Atlanta Medical College; assisted by Omar F. Elder, M.D.

The Wassermann Reaction. By J. Edgar Paullin, M.D. Second edition, revised, with 109 illustrations. Price 16*s*. net.

CHURCHILL, J. AND A., London.

School Lighting. By Elwin H. T. Nash, D.P.H., Medical Officer of Health and School Medical Officer to the Borough of Wimbledon. Price 1*s*. net.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.

Arteriosclerosis. A Consideration of the Prolongation of Life and Efficiency after Forty. By Louis Faugeres Bishop, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine, New York City. Price 10*s*. 6*d*. net.

HEFFER, W., AND SONS, LIMITED, Cambridge. Agents: SIMPKIN, MARSHALL, AND CO., London.

Elizabethan Drama and its Mad Folk, being the Harness Prize Essay for 1913. By Edgar Allison Peers, B.A. Price 3*s*. 6*d*. net.

HODDER, WILLIAM, AND CO., Edinburgh and London.

Problems of School Hygiene. Being a Report of the First Conference of Scottish School Medical Officers. Edited by W. Leslie Mackenzie, M.A., M.D., LL.D., and Lewis D. Cruickshank, M.D., D.P.H. Price 2*s*. 6*d*.

JARROLD AND SONS, London.

How to Breathe, Speak, and Sing. By Robert Stephenson, B.A. Cantab. Price 1*s*. 6*d*. net.

LEWIS, H. K., London.

Anæsthetics: Their Uses and Administration. By Dudley Wilmot Buxton, M.D., B.S. Fifth edition. Price 10*s*. 6*d*. net.

Appointments.

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALLFREY, F. H., M.B., B.C. Cantab., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Shoreham District of the county of Sussex.

DAVIES, E. T. H., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Tredegar District of the county of Monmouth.

EVANS, ALBERT EDWARD, M.B., B.S. Lond., has been appointed a Medical Inspector under the Board of Control (Medical Deficiency Act).

ORCHARD, J. E. R., M.B., Ch.B. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Crewkerne District of the county of Somerset.

PRIDMORE, J. W., M.R.C.S., L.R.C.P. Lond., has been appointed Honorary Medical Officer to the Royal Isle of Wight County Hospital.

REDWOOD, R. V. DE A., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Rhymney District of the county of Monmouth.

RICHMOND, J. R. M., L.M.S.S.A. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the St. Just District of the county of Cornwall.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARGYLL, COUNTY OF.—Assistant County Medical Officer and Executive Tuberculosis Officer. Salary £300 per annum.

BARNSLEY, BECKETT HOSPITAL AND DISPENSARY.—Second House Surgeon, unmarried. Salary £100 per annum, with apartments, board, and laundry.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £120 per annum, with residence, board, and laundry.

BEDFORD COUNTY HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and laundry.

BIRKENHEAD UNION INFIRMARY.—Senior Resident Assistant Medical Officer. Salary £150 per annum, with board, apartments, &c.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salary £80 per annum each, with board, washing, and attendance.

BIRMINGHAM GENERAL DISPENSARY.—Resident Medical Officer, unmarried. Salary £220 per annum, with apartments, fire, light, and attendance.

BOLTON INFIRMARY AND DISPENSARY.—Senior House Surgeon. Salary £150 per annum, with apartments, board, and attendance.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

BRADFORD ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

BRISTOL CITY ASYLUM.—Second Assistant Medical Officer, unmarried. Salary £200 per annum, with apartments, board, washing, and attendance.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Physician. Salary £80 per annum, with board, rooms, attendance, and laundry.

BRISTOL ROYAL INFIRMARY.—Two House Surgeons, House Physician, and Throat, Nose, and Ear House Surgeon, all for six months. Salaries at rate of £100 per annum, with board, apartments, and laundry.

BROADMOOR, CROWTHORNE, BERKS, STATE CRIMINAL LUNATIC ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £225 per annum, with quarters, coal, gas, and attendance.

BURNLEY, VICTORIA HOSPITAL.—Second House Surgeon for six months. Salary at rate of £100 per annum, with residence, board, and washing.

BURY INFIRMARY.—Junior House Surgeon. Salary £100 per annum, with board, residence, and washing.

CARLISLE, CUMBERLAND AND WESTMORLAND ASYLUM, Garlands.—Junior Assistant Medical Officer, unmarried. Salary £200 per annum, with board, lodging, and washing.

CARLISLE NON-PROVIDENT DISPENSARY.—Resident Medical Officer. Salary £200 per annum, with apartments.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd-street, St. Pancras, W.C.—House Surgeon. Salary at rate of £50 per annum, with board and residence.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-Inn-road, W.C.—Resident House Surgeon. Salary £50 per annum, with board and laundry.

CHELTENHAM GENERAL HOSPITAL.—House Physician, unmarried. Salary £100 per annum, with board, lodging, and washing.

CHICHESTER, WEST SUSSEX COUNTY MENTAL HOSPITAL.—Junior Assistant Medical Officer. Salary £200 to £250 per annum, with apartments, board, laundry, and attendance.

DERBY COUNTY ASYLUM, Mickleover, Derby.—Junior Assistant Medical Officer. Salary £200 per annum, with board, lodging, and washing.

DERBY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £150 per annum, with board and residence.

DEVONPORT, ROYAL ALBERT HOSPITAL.—House Surgeon, unmarried. Salary £80 for first six months, £75 for second six months, and at rate of £150 per annum during second year. Also Assistant House Surgeon, unmarried. Salary at rate of £75 per annum, with board and laundry.

DEWSBURY AND DISTRICT GENERAL INFIRMARY.—House Surgeon. Salary £120 per annum, with board, residence, and laundry.

DONCASTER ROYAL INFIRMARY AND DISPENSARY.—Assistant House Surgeon. Salary £100 per annum, with board, apartments, and washing.

DUDLEY, GUEST HOSPITAL.—Senior Resident Medical Officer. Salary £120 per annum, with board, residence, attendance, and washing.

DURHAM COUNTY ASYLUM.—Junior Assistant Medical Officer, unmarried. Salary £200 per annum, with board, lodging, and washing.

DURHAM COUNTY COUNCIL.—Assistant Tuberculosis Medical Officer. Salary £300 per annum.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon. Salary £70 per annum, with board, washing, and lodging.

EDINBURGH ROYAL INFIRMARY.—Clinical Pathologist. Salary £250 per annum.

ENNISKILLEN, FERMANAGH COUNTY HOSPITAL.—House Surgeon. Salary £104 per annum.

ESSEX, ADMINISTRATIVE COUNTY OF.—Assistant Tuberculosis Officer. Salary £300 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.—House Surgeon for six months. Salary at rate of £75 per annum, with board, residence, and washing.

GRANGE-OVER-SANDS, WESTMORLAND CONSUMPTION SANATORIUM AND HOME, Meathop.—Second Assistant Medical Officer. Salary £150 per annum.

HALIFAX ROYAL INFIRMARY.—Second House Surgeon and Third House Surgeon, unmarried. Salary £100 and £80 per annum respectively, with residence, board, and washing.

HALIFAX UNION POOR-LAW HOSPITAL, Salterhebble.—Resident Medical Officer. Salary £120 per annum, with apartments, rations, and washing.

HASTINGS, EAST SUSSEX HOSPITAL.—House Physician. Salary at rate of £80 per annum, with residence, board, and washing.

HEREFORD COUNTY AND CITY ASYLUM.—Locum Tenens Assistant Medical Officer for three to four months. Salary £5 5s. per week, with board, lodging, and washing.

HOSPITAL FOR EPILEPSY AND PARALYSIS, AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Resident Medical Officer for six months. Salary at rate of £75 per annum, with board, lodging, and washing.

HULL ROYAL INFIRMARY.—House Physician, unmarried. Salary £100 per annum, with board and apartments.

HUNTINGDONSHIRE COUNTY COUNCIL.—Assistant County Medical Officer and Assistant School Medical Officer (female). Salary £300 per annum.

KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum and board.

LEEDS MATERNITY HOSPITAL.—Honorary Medical Officer.

LEEDS UNIVERSITY, DEPARTMENT OF PATHOLOGY.—Locum Tenens for Demonstrator of Bacteriology.

LEEDS, WEST RIDING ASYLUM, Menston.—Fourth Assistant Medical Officer. Salary £200 per annum, with board and apartments.

LEICESTER POOR-LAW INFIRMARY.—First Resident Assistant Medical Officer and Second Resident Assistant Medical Officer. Salary £200 and £150 per annum respectively, with rations, apartments, and washing.

MAIDSTONE, KENT COUNTY ASYLUM.—Fourth Assistant Medical Officer, unmarried. Salary £200 per annum, with quarters, attendance, washing, &c.

MANCHESTER CHILDREN'S HOSPITAL (OUT-PATIENTS' DEPARTMENT), Gartside-street.—Assistant Medical Officer for six months. Salary £50 per annum.

MANCHESTER, MONSALL FEVER HOSPITAL.—Third Medical Assistant. Salary £130 per annum, with board, lodgings, and washing.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park-place, Cheetham Hill-road.—Honorary Physician for Diseases of Children. Also House Surgeon.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary at rate of £85 per annum, with board, residence, and laundry.

NEWARK-UPON-TRENT HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and laundry.

NEWCASTLE-UPON-TYNE, CORPORATION CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Assistant. Salary £200 per annum, with board, lodging, &c.

NEWCASTLE-UPON-TYNE, HOSPITAL FOR SICK CHILDREN.—Junior Medical Officer for six months. Salary £80 per annum, with board, lodging, and laundry.

NEWCASTLE-UPON-TYNE, ROYAL VICTORIA INFIRMARY.—Resident Medical Officer and Assistant Resident Medical Officer. Salaries £200 and £150 per annum respectively, with board and residence. Also Medical and Surgical Registrars.

NORFOLK EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £250 per annum.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Physician. Salary £100 per annum, with board, residence, and laundry.

OLDHAM ROYAL INFIRMARY.—Senior House Surgeon and Second House Surgeon for six months. Salary £140 and £120 per annum respectively, with residence, board, and laundry.

PRESTON ROYAL INFIRMARY.—Resident Medical and Surgical Officer, unmarried. Salary £150 per annum, with board, residence, and laundry.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Senior House Physician. Salary £75 per annum, with residence, board, and laundry. Also Pathologist. Salary 120 guineas per annum. Also Honorary Medical Registrar.

READING, ROYAL BERKSHIRE HOSPITAL.—Second House Surgeon for six months. Salary at rate of £80 per annum, with lodging, board, and washing.

ROCHDALE INFIRMARY.—Senior House Surgeon, unmarried. Salary £110 per annum, with board, residence, and laundry.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £100 per annum, with board, lodging, and washing.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Election to the Court of Examiners.

ROYAL LONDON OPHTHALMIC HOSPITAL.—Assistant Surgeon.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, and laundry.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA, AND OTHER DISEASES OF THE RECTUM, City-road, E.C.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SALISBURY INFIRMARY.—Assistant House Surgeon, unmarried. Salary £75 per annum, with apartments, board, lodging, and washing.

SHEFFIELD ROYAL INFIRMARY.—House Surgeon and Ophthalmic House Surgeon for six months. Salary £80 per annum each, with board and residence.

SHEFFIELD UNION HOSPITAL, Firvale.—Resident Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, rations, &c.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon. Salary at rate of £100 per annum, with rooms, board, and washing.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House Physician, unmarried. Also Casualty and Out-patient Officer, unmarried, for six months. Salary at rate of £110 per annum each, with board, residence, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £120 per annum, with board, lodging, and washing.

THROAT HOSPITAL, Golden-square, W.—Honorary Dental Surgeon.

TOTTENHAM EDUCATION COMMITTEE.—Assistant School Medical Officer. Salary £300 per annum.

TRINIDAD, BRITISH WEST INDIES.—Three Medical Officers required to Conduct Campaign against Ankylostomiasis. Medical Officer in Charge, salary £600 per annum. Two Assistant Medical Officers, salaries £400 per annum.

WAKEFIELD, WEST RIDING ASYLUM.—Locum Tenens Assistant Medical Officer. Apartments, board, &c.

WALSALL AND DISTRICT HOSPITAL.—Senior House Surgeon and Assistant House Surgeon. Salary £150 and £110 per annum respectively, with board, residence, and laundry.

WARRINGTON, LANCASHIRE COUNTY ASYLUM, Winwick.—Locum Tenens Medical Officer for about five months. Board, apartments, attendance, and washing provided.

WEST END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, PARALYSIS, AND EPILEPSY, 73, Welbeck-street, W.—Out-Patients' Physician.

WEST HAM UNION SICK HOME, Forest-lane, Forest Gate.—Second Assistant Resident Medical Officer. Salary £160 per annum. Also Female Assistant Medical Officer at Workhouse, Union-road, Leytonstone, N.E. Salary £140 per annum.

WEST HARTLEPOOL, CAMERON HOSPITAL.—House Surgeon, unmarried. Salary £120 per annum, with rooms, board, &c.

WEST LONDON HOSPITAL, Hammersmith, W.—Ophthalmic Surgeon.

WESTMINSTER HOSPITAL.—Surgical Registrar. Salary £50 per annum.

WIGAN, ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with board, apartments, and washing.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Also Two House Surgeons. Salary in each case £125 per annum, with board, rooms, and laundry.

WOOLWICH INFIRMARY, Plumstead.—Assistant Resident Medical Officer, unmarried. Salary £180 per annum, with apartments, rations, and washing.

WORKINGTON, BOROUGH OF.—Lady Health Visitor. Salary £85 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of a vacancy for a Certifying Surgeon under the Factory and Workshop Acts at Kirkcaldy, in the county of Fife.

Births, Marriages, and Deaths.

BIRTHS.

ADDISON.—At Prestwood, Great Missenden, on Easter Sunday, the wife of Dr. Christopher Addison, M.P., of a son.

CALLENDER.—On April 5th, at Inverard, Sidcup, the wife of Thomas Marshall Callender, M.D., F.R.C.S. Edin., of a daughter.

STEADMAN.—On April 7th, the wife of F. St. J. Steadman, D.P.H., M.R.C.S., L.R.C.P., L.D.S., a daughter.

WARNER.—On April 7th, at The Square, Fakenham, Norfolk, the wife of Howard F. Warner, M.B., B.S. Lond., of a son.

MARRIAGES.

PHILP—FUSSELL.—On April 16th, at Upton St. Leonards, Gloucester, by the Rev. A. J. Rendle, M.A., Vicar of Bleddington, Glos., brother-in-law of the bride, assisted by the Rev. Canon Brewster, Rector of the Parish, Claude Hastings Philp, B.A., M.B., B.C. Cantab., only son of Mr. and Mrs. G. Hastings Philp, of The Wells, Podsmead-road, Gloucester, of Cantilupe House, Hereford, to Margaret, youngest daughter of the late W. F. Fussell, of Mells, Somerset, and Mrs. Fussell, of "Carnarvon," Bournemouth.

SLADDEN—WILLIAMS.—On April 15th, at Dowlais, Arthur P. S. Sladden, M.D., second son of Julius Sladden, of Badsey, Worcestershire, to Mary Christabel Williams, third daughter of the Rev. Ll. M. Williams, Rector of Dowlais.

SMITH—JOHNSTON.—On April 11th, at the Cathedral, Newcastle-on-Tyne, Henry Gordon Smith, M.B., B.S. Lond., D.P.H., to Alice Grace, daughter of James Harvey Johnston, of Newcastle-on-Tyne.

DEATHS.

CHARLTON.—On April 13th, at Glendarroch, Lenton, Nottingham, Alfred Charlton, M.B., C.M.

COLLYER.—On April 9th, at Paignton, South Devon, Bertram Joseph Collyer, M.R.C.S., L.R.C.P., aged 44 years.

HILDER.—On April 9th, Ridley Thomas Hilder, M.B., M.R.C.S., of Teviot House, Upper Tooting, London, S.W., and Cockfield, Suffolk, in his 70th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PROPOSED NEW PHARMACY LEGISLATION.

THE Assistants to Chemists and Druggists (Qualification) Bill, which is now before Parliament, seeks to introduce into pharmacy law a new principle. The main effects of the existing Pharmacy Acts are to protect certain pharmaceutical titles and to restrict to registered chemists and druggists the sale of poisons, these measures being based upon the assumption that the public is best protected from the misuse of poisons by educating the poison seller. There is nothing apparently in these enactments to prevent persons who are not qualified from compounding medicines providing the actual sale of preparations containing scheduled poisons is performed by registered pharmacists. To some extent, however, the National Insurance Act corrected this deficiency by providing that medicines for insured persons should be dispensed either "by or under the direct supervision of a registered pharmacist or by a person who, for three years prior to the passing of this Act, has acted as a dispenser to a duly qualified medical practitioner or a public institution." This provision only applies to medicines for insured persons, and leaves untouched the question of medicines prescribed by medical practitioners for their private patients. An extension of this principle is aimed at in the new Bill, which appropriately enough has been drafted by the Pharmaceutical Society in pursuance of a promise made while the Insurance Bill was before Parliament that steps would be taken to promote a measure to make provision for dispensers. The first clause of the Bill proposes to make it an offence for "any person, who not being a duly registered chemist and druggist, or registered under this Act, acts as assistant to a chemist in compounding any medicine prescribed by a duly qualified medical practitioner." The usual reservation is, however, made for medical practitioners who desire to dispense their own medicines, and there is an exemption in favour of registered apprentices who compound medicines under the supervision of registered chemists. To make more secure the object of the first clause, a subclause prohibits chemists from employing non-registered assistants for compounding medicines. With the exception of certain persons who would be eligible for registration as assistants without examination, those desirous of being registered would be required to pass an examination, and the Bill proposes to empower the Council of the Pharmaceutical Society to make by-laws enabling them to establish an examination, and, in fact, to regulate the proper carrying out of the provisions of the measure. Qualified military dispensers, certified assistants under the Apothecaries Act, and persons who had been for not less than three years immediately preceding the passing of the Bill employed by a medical practitioner or by a chemist as an assistant in compounding medicine, would be entitled to registration without examination. These are briefly the provisions of a measure which appear to be based upon a sound principle, but the probability of the measure reaching a final stage during the present session of Parliament seems to be remote.

GLYCOSURIA AND THE SUGAR INDUSTRY.

To the Editor of THE LANCET.

SIR,—I should like to know if people (white and coloured) living and working on cane sugar estates are subject to glycosuria, and if so are there any statistics on the subject? Perhaps some of your readers would be able to furnish the answer through the columns of your valuable journal.

I am, Sir, yours faithfully,

F. C. MACNALTY, M.D. Dub.

Winchester, April 13th, 1914.

VITAL STATISTICS OF BERMUDA.

IN a belated report on the Blue-book for 1912 of the Colony of Bermuda (a cluster of small islands situated in the west of the Atlantic Ocean, in 32° 15′ N. lat. and 64° 51′ W. long., comprising an area of about 19 square miles), Mr. R. Popham Lobb, the Colonial Secretary, gives the estimated total population, including the naval and military establishments, as 22,073. The resident civil population numbered 19,591—7000 white (3339 males and 3661 females) and 12,591 coloured (6051 males and 6540 females). The birth-rate was 33·22 (22·57 per 1000 white and 39·15 per 1000 coloured). The mortality during the year was exceedingly low. The death-rate among the naval and military garrison, including women and children, was 3·62 per 1000, whilst among resident civilians it was 12·42 for white and 18·90 for coloured. The deaths of children under 5 years of age formed 40·5 per cent. of the total deaths. There has hitherto been no hospital maintained by the Colonial Government, but during 1912 an Act was passed providing for the building of a general hospital, to be known as the King Edward VII. Memorial Hospital, of which the surgical unit and operating-room are being in the first instance erected. There is a cottage hospital near the city of Hamilton which is supported by voluntary contributions, and hospitals are also maintained in connexion with the Imperial naval and military establishments. There is a lunatic asylum under the superintendence of the medical officer of health, and the number of patients in this institution at the end of the year was 65. The mean temperature of the air in 1912 was 71·1°. Rain fell on 167 days, the total rainfall registered being 51·38 inches, of which 36·9 per cent. fell in the two months of July and August. The islands are much frequented as a health resort by Americans and Canadians, and the number of tourists who arrived during 1912 was 24,830. Many additions have been made to the smaller hotels and several new ones started.

BUSINESS METHODS IN THE MEDICAL PROFESSION.

To the Editor of THE LANCET.

SIR,—That medical men are unbusinesslike is proverbial, but I have never before come across quite such a document as the one, headed "Balance Sheet for 1913," which has just reached me from the Metropolitan Police Surgeons' Association.

In the first place it is not usual to head a balance sheet with "Dr." and "Cr." but with "Assets" and "Liabilities." On the right-hand side of this balance sheet—the side usually reserved for assets—occurs the item "musical entertainment, £5 5s." How such item finds its way into a balance sheet I know not, unless the unfortunate musicians have not yet been paid for their services, in which case I would respectfully suggest that the item should be transferred to the other side of the page to figure amongst the liabilities. Of course, this document is no "balance sheet" at all, but simply a "cash account." This being so, may I point out that cash received is "Dr." and cash paid out is "Cr.," and not the reverse as herein stated. Further, it is usual for "Dr." to appear on the left side of the page and "Cr." on the right, not *vice versâ*.

Finally, I observe that the item for "Printing and postages" represents a sum equivalent to 45 per cent. of the year's income. Surely I cannot have received my due supply of literature.

Can it be a fact that this association possesses no assets beyond its cash balance? If so, I would congratulate the honorary treasurer on his marked success in getting in all his annual subscriptions before the end of the year, and the members on their promptness in paying.

Perhaps I may be told that outstanding subscriptions and other assets are included in the "balance" shown in this document. If this be so, then I erred in calling it a "cash a/c," and will substitute the words "capital a/c," in which case the "income" and "expenditure" appear on their wrong sides of the page.

In short, it is a hopeless muddle.

I am, Sir, yours faithfully,

April 11th, 1914. A METROPOLITAN POLICE SURGEON.

THE WORKMEN'S COMPENSATION ACT: A NOVEL POINT.

AT Tavistock, Devon, before his honour Judge Lush-Wilson, K.C., the point was raised whether the illegitimate child of a second wife, not by her husband, should be treated as her husband's stepson, and consequently become a dependent and entitled to a share of the compensation money. His honour said it was a nice point, but eventually decided against the child being allowed compensation.

CLIMATOLOGY.

Italian.—With regard to the effects of mountain climates on man there is the Italian work of Professor Angelo Mosso on the "Life of Man on the High Alps" (T. Fisher Unwin, London), 1898, translated from "Fisiologia dell'Uomo sulle Alpi" (Frat. Treves, Milano), 1897. The best work is still probably "Höhenklima und Bergwanderungen in ihrer Wirkung auf den Menschen," by Professor Dr. N. Zuntz, Professor Dr. A. Loewy, Dr. Franz Müller, and Dr. W. Caspari, published by the Deutsches Verlagshaus Bong und Co., Berlin (W.57, Potsdamerstrasse 88), and Leipzig, Wien, Stuttgart und Paris, first edition, 1906, which contains references to most previous publications on the subject. Since then there have appeared many articles on portions of the subject by various authors—e.g., works by Dr. J. S. Haldane, "Methods of Air Analysis," published in 1912 at 5s. net by Charles Griffin and Co., Limited, London, and articles in the German "Zeitschrift für Balneologie." In regard to the effects of sea air and mountain air generally, reference should be made to "Climatotherapy and Balneotherapy," by Sir Hermann

Weber, M.D., and F. Parkes Weber, M.D., third edition published in 1907 at 15s. net by Messrs. Smith, Elder, and Co., 15, Waterloo-place, London; and "A Handbook of Climatic Treatment, including Balneology," by William R. Huggard, M.D., published at 12s. 6d. net by Messrs. Macmillan and Co., Limited, London. Of the former book (Weber) a shorter German version was published (Paul Mayer) which has been in its turn translated into French, Russian, and Polish, but not into Italian.

PRECIPITATE LABOUR.

A CURIOUS case of attempted concealment of birth occurred recently in Australia. A popular pleasure steamer left Melbourne for Geelong to pick up the members of a picnic party. A few passengers had embarked at Melbourne, and while steaming down the bay the body of a recently born infant was found on the floor of the female lavatory. A police constable who happened to be on board was informed, and he interviewed all the female passengers at once, but no one admitted to the ownership of the infant. Suspicion fell upon a young woman who was seated in the company of a young man, and she was detained on arrival at Geelong. She subsequently admitted having given birth to the child on the steamer, and she and the infant were removed to hospital. The child died next morning. The case has a medico-legal interest, as the steamer would not occupy more than an hour and a half on the run between the two jetties.

HEALTH OF ST. VINCENT.

THE Administrator and Colonial Secretary of St. Vincent, the Hon. C. Gideon Murray, in his report for 1912–13, just presented to Parliament, gives the population of the colony as 44,434. The births registered during the year numbered 1678 (of which 59·83 per cent. were illegitimate), as against 1790 in the preceding year. The deaths totalled 878, being 19·75 per 1000 of the estimated population; the infant mortality constituted 21·07 per cent. of the total number of deaths. In the towns the authorities are realising more and more the importance of stricter sanitation and are taking steps accordingly. In the villages, however, sanitary matters are still on a primitive basis. The establishment of an organised sanitary department now under contemplation should have far-reaching effect. A trained nurses' association has recently been formed, which has for its object the better training of nurses and midwives and the prosecution of women practising midwifery illegally. Early in the year 1911–12 the old military hospital was renovated and opened as a yaws hospital capable of holding 50 patients. The disease of yaws has long been ravaging the homes of the labouring population in the colony, and the institution of this hospital is much appreciated by them. The introduction of salvarsan has more than doubled the number of patients passing through and out of this hospital as cured during the year. The rainfall for the year was 94·89 inches, as against 119·07 inches in 1911–12. Rain fell on 275 days during the year. The mean monthly temperature was 78° F.; the maximum for the year was 80·6° in September and the minimum 73·5° in February. Except in August and September, when the atmosphere is uncomfortably hot, although not even in those months insalubrious, the climate may be regarded as most healthy for both Europeans and coloured persons. Malaria is hardly known, while yellow fever has proved itself to be a disease of the past. The approaching opening of the Panama Canal is already causing an influx of visitors to these Caribbean seas, and if exquisite scenery and a healthy climate be inducements to travellers, then as years speed on it may be expected that St. Vincent will be one of the most favoured tourist spots amongst the many beautiful West Indian Islands.

ROAD RULES FOR PEDESTRIANS.

Dr. C. W. Hutt, senior school medical officer to the county borough of Brighton education committee, inquires where he can obtain some simple road rules for the use of children attending elementary schools, so as to prevent as far as possible their being run over in the streets. He has an impression that he saw a reference to some such rules a few years ago in one of the medical journals. His intention is to send them to the head teachers of the elementary schools with a view to their being explained and taught to the children.—We believe that one of the leaflets issued lately by the London General Omnibus Company gave simple rules for pedestrians crossing the road. A correspondent in this connexion has sent us these rules, which apply to traffic in large towns: "Pause on the curb facing the roadway; look to right and then to the left. If the road is reasonably clear, cross to the middle, where pause and look to the left; if course is clear, proceed to opposite curb. When crossing, face slightly the approaching streams of traffic. Avoid running, but be ready to spring suddenly if danger threatens. When dismounting from a vehicle always make for the nearest curb immediately, no matter where you want to go afterwards."

Mr. F. Hiller.—The makers of Dr. Rogers' "Tycos" sphygmomanometer are Messrs. Short and Mason, Limited, Macdonald-road, Walthamstow, London, N.E.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

We shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced:—

April 15th–18th (Berlin).—Forty-third Congress of the German Surgical Society.
" 19th–21st (Berlin).—"Jubilee" Congress of the German Röntgen Society.
" 20th–23rd (Wiesbaden).—Thirty-first German Congress for Internal Medicine.
" 27th–May 1st (London, Royal Horticultural Hall).—Nursing Conference and Exhibition.
May 1st–Nov. 1st (Lyons).—International Town Hygiene Exhibition.
" 15th–Oct. 15th (Berne).—Swiss National Exhibition.
May 18th–21st (London, Imperial Institute).—Victoria League Imperial Health Conference.
May–October (London, Shepherd's Bush).—Anglo-American Exposition.
June 8th–10th (Berne).—Seventh International Dairy Congress.
" 18th–24th (London, Church House, Westminster).—International Conference on the Blind.
June–July (Groningen).—University of Groningen 300th Anniversary Celebration.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

FRIDAY.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—F. Langmead, Philip Turner, W. J. Midelton): at 4.30 P.M.

Demonstration of Cases.

SECTION OF EPIDEMIOLOGY AND STATE MEDICINE (Hon. Secretaries—G. S. Buchanan, William Butler): at 8.30 P.M.

Paper:
Dr. Harold Kerr and Professor H. J. Hutchens, D.S.O.: An Outbreak of Food Poisoning caused by the Bacillus Enteritidis (Gaertner) in Milk.

LONDON DERMATOLOGICAL SOCIETY, St. John's Hospital, 49, Leicester-square, W.C.

TUESDAY.—4.30 P.M., Cases will be shown. 5.15 P.M., Discussion on Some Dermatological Problems, opened by Dr. P. White (Wigan).

CHELSEA CLINICAL SOCIETY, Club Rooms of the Medical School, St. George's Hospital, S.W.

TUESDAY.—8.30 P.M., Papers:—Dr. E. G. Reeve: Some Points in the Administration of Intensive Nascent Iodine Treatment.—Dr. H. Dally: Some Observations on the Intense Nascent Iodine Treatment. A discussion will follow.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY.—5 P.M., Mr. Shattock: Specimens illustrating Osteoma. (Museum Demonstration.)

FRIDAY.—5 P.M., Prof. Keith: The Comparative, Surgical, and Pathological Anatomy of the Great Bowel. (Museum Demonstration.)

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—Out-patient Demonstrations:—10 A.M. Dr. H. B. Carlill: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2.15 P.M., Mr. W. Turner: Surgery. 3 P.M., Mr. W. Turner: Operations. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.15 P.M., Mr. R. Lake: Ear and Throat. 3.15 P.M., Special Lecture:—Sir Dyce Duckworth: The Diagnosis of Hepatic Abscess.

TUESDAY.—Out-patient Demonstrations:—10 A.M., Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.—2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Mr. R. Carling: Surgery. 3.15 P.M., Dr. G. Rankin: Medicine. 4.15 P.M., Sir Malcolm Morris: Skin.

WEDNESDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. B. Carlill: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. B. Bickerton: Eye.—2 P.M., Mr. L. V. Cargill or Mr. Choyce: Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.15 P.M., Mr. Cargill: Eye Clinique. 4.30 P.M., Mr. C. C. Choyce: Surgery. 3.15 P.M., Special Lecture:—Mr. L. V. Cargill: The Routine of Ophthalmoscopic Examination.

THURSDAY.—Out-patient Demonstrations:—10 A.M., Dr. H. R. Prentice: Medical. Mr. H. Curtis: Surgical. 12 noon, Mr. G. N. Biggs: Throat, Nose, and Ear.—2 P.M., Mr. R. Carling or Mr. W. Turner: Operations. Dr. A. Davies: Pathological Demonstration. 3.15 P.M., Dr. R. Wells: Medicine. 4.30 P.M., Special Lecture:—Dr. C. E. Zundel: Tachycardia.

FRIDAY.—Out-patient Demonstrations;—10 A.M., Dr. C. R. Zundel: Medical. Mr. Cole: Surgical. 12 noon, Dr. H. MacCormac: Skin.——2 P.M., Mr. L. McGavin: Operations. 2.15 P.M., Sir John Rose Bradford: Medicine. 3.15 P.M., Mr. L. McGavin: Surgery.
SATURDAY.—Out-patient Demonstrations: 10 A.M., Dr. H. R. Prentice: Medical. Mr. Cecil Rowntree: Surgical. 11 A.M., Mr. R. E. Bickerton: Eye.——10 A.M., Col. Barry: Radiography.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.
MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Dr. Pritchard: Bacterial Therapy Department. Mr. B. Harman: Diseases of the Eye.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations. Dr. Simson: Diseases of Women, and Diseases of the Eye.
THURSDAY.—9 A.M., Dr. Bernstein: Bacterial Therapy Department. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Armour: Operations. Mr. B. Harman: Diseases of the Eye.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Baldwin: Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Pernet: Diseases of the Skin.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear, and Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Pardoe: Operations.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, Medical School, City-road, E.C.
MONDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Cardiac Department, Dr. Stott; Out-patient Department, Dr. Phear, Dr. S. Thompson. 3 P.M., Wards, Dr. Phear.
TUESDAY.—9 A.M., Laryngological Department, Mr. Mant. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. M. Leslie, Dr. B. King; Operations, Mr. A. Evans. 3 P.M., Wards, Dr. White. 4 P.M., Wards, Dr. M. Leslie
WEDNESDAY.—2 P.M., Wards, Dr. A. Davies; Out-patient Department, Dr. Drysdale, Dr. Kellie. 4 P.M., Wards, Dr. Drysdale. 4.30 P.M., Roentgen Ray Department, Dr. Jordan.
THURSDAY.—9.30 A.M., Dental Department, Mr. G. Thomson. 10 A.M., Cardiac Department, Dr. Stott. 1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Out-patient Department, Dr. Phear, Dr. S. Thompson. 4.30 P.M. Laryngological Department, Mr. Mant.
FRIDAY.—1.30 P.M., Department for the Prevention of Consumption. 2 P.M., Wards, Dr. Calvert; Out-patient Department, Dr. M. Leslie, Dr. B. King.
SATURDAY.—10 A.M., Out-patient Department, Dr. Drysdale, Dr. Kellie. 11.30 A.M., Roentgen Ray Department, Dr. Jordan.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn-road, W.C.
FRIDAY.—3 P.M., Lecture:—Dr. J. Atkinson: Suppuration in the Region of the Pharynx.

THE THROAT HOSPITAL, Golden-square, W.
MONDAY.—5.15 P.M., Special Demonstration of Selected Cases.
THURSDAY.—5.15 P.M., Clinical Lecture.

LONDON LOCK HOSPITAL, 91, Dean-street, Soho, W.
Special Course of Instruction in Venereal Diseases, for Post-Graduates and Students, with Practical Demonstrations of the Various Methods of Treatment:—
MONDAY.—Clinics:—1 P.M., Mr. Ryall; 6 P.M., Mr. Gibbs.
TUESDAY.—Clinics:—2 P.M., Mr. Lane; 6 P.M., Mr. Paterson.
WEDNESDAY.—Clinic:—6 P.M., Mr. Shillitoe.
THURSDAY.—Lecture:—2 P.M., Mr. Lane: The Primary Chancre, its Varieties, Diagnosis, and Treatment.
SATURDAY.—Clinic:—2 P.M., Mr. McDonagh.

MANCHESTER HOSPITALS POST-GRADUATE CLINICS.
TUESDAY.—MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASE—4.30 P.M., Prof. R. B. Wild: Radium in Dermatology.
WEDNESDAY.—ROYAL INFIRMARY—4.30 P.M., Mr. Buckley: Hæmaturia.
THURSDAY.—ANCOATS HOSPITAL—4.15 P.M., Dr. D. E. Core: Clinical Examination of the Nervous System.

UNIVERSITY OF SHEFFIELD, at the University.
Post-Graduate Course on Syphilis:—
TUESDAY.—3 P.M., Dr. H. Henry: Biology of the Spirochætes.
FRIDAY.—3 P.M., Dr. H. Henry: The Spirochæte of Syphilis (with cinematograph illustrations).

For further particulars of the above Lectures, &c., see Advertisement Pages.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.
Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.
We cannot prescribe or recommend practitioners.
Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."
Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*
We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 15th, 1914.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
April 9	29·73	S.W.	0·06	89	52	42	46	49	Fine
,, 10	29·73	S.W.	0·07	102	57	41	45	50	Cloudy
,, 11	29·83	N.W.	0·05	94	68	47	48	54	Cloudy
,, 12	30·25	S.W.	...	104	60	47	49	57	Fine
,, 13	30·16	N.W.	...	97	64	41	53	58	Cloudy
,, 14	30·32	N.W.	...	110	59	41	45	48	Fine
,, 15	30·52	N.	...	97	58	42	43	48	Fine

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